Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.10.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 466 168

Injection pump

Pump designation : PES6MW100/120RS1238

EP type number : 0 413 406 237

Governor

Governer design. : RSV450...1000MW2A389

Governer no. : 0 420 085 269

Cust. part No. : 3929167

Customer-spec. information

: CDC Customer : 6 CT-830 Motor : 134.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance *C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

: 1 680 750 014 Test lines

Outside diameter : 6.0 x inside diameter: 2.0 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 2.80 Tolerance mm : + 0.05

test only : + - 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + 0.50Tolerance

Check

tolerance *NW : + 0.75

Start of delivery blocking

7.50 *NW after s.o.d. :

1 Barrel no. :

BASIC SETTING

1000 Rated speed rpm

Rack travel in mm : 11.60 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 126.0

Tolerance

cm3/1000 strokes : +- 1.0

<u> </u>	Check tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000s. : 7.5
Spreed	
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER control lever
Check tolerance cm3/1000s. : 7.5	position degree : 99.0 tolerance degree : +- 4.0
Rated speed rpm : 450	RATED SPEED
Rack travel in mm: 6.50 Tolerance mm: + 0.30 Del. quantity	rack travel mm : 10.60 Rated speed rpm : 1050 Tolerance 1/min : +- 5
cm3/1000 strokes : 28.0	rack travel mm : 4.00
cm3/1000 strokes : + 2.0 Check tolerance	Rated speed rpm : 1155 Tolerance 1/min : + 15
cm3/1000s. : + 4.5	
Spreed + Tolerance + cm3/1000 strokes : 3.5 + cm3/1000 strokes : 3.5	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
Check tolerance cm3/1000s. : 5.5	rack travel mm : 4.00 Rated speed rpm : 1165
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
ATIII GOVERNOR	
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever
+	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65	control lever position degree : 82.0
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1000
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.60
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0 Tolerance	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1000
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 750
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 750 rack travel mm : 12.40
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 82.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 450 rack travel mm : 6.50 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 750

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.40
Tolerance mm : + 0.10

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 11.40
Tolerance mm : + 0.05

Rated speed rpm : 500

Pressure hPa : 650 rack travel mm : 12.10 Tolerance mm : + 0.15

Pressure hPa : 550 rack travel mm : 11.70 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1000 hPa 750 Rated speed rpm Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s.5.0 : +-Spreed Tolerance cm3/1000 strokes : 6.0

Check tolerance cm3/1000S. : 9.0

Aneroid pressure

Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm: 10.60
Rated speed rpm: 1050
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.00
Tolerance mm : + 1.00
Del. quantity
cm3/1000 strokes : 170.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 13.0

LOW IDLE

Rated speed rpm 450 rack travel mm 6.50 : +- 0.30Tolerance mm Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance 4.5 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s.5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.10.95 Test oil : ISO 4113

Combination No. : 0 401 846 991

Injection pump

Pump designation : PE6P110A320RS3108-1

EP type number : 0 411 816 757

Governor

Governer design. : RQV250...1100PA920

: -10

Governer no. : 0 421 814 106

Cust. part No. : 425823 PO2 RELEASED

Customer-spec. information

Customer : VOLVO-TRUCK
Motor : THD 102 KB

Power KW : 212.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : \leftarrow 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.30 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 191.0

	+ Tolerance mm : + 0.25
Tolerance	+
cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 520 + guide sleeve
Check tolerance	+ travel mm : 4.67
cm3/1000s. : + 3.0	Tolerance mm : + 0.25
Spreed	Rated speed rpm : 1370
Tolerance cm3/1000 strokes : 4.0	+ guide sleeve + travel mm : 11.50
Charled Strokes : 4.0	+ Tolerance mm : + 0.50
Check tolerance	- Total discontinue
cm3/1000s. : 7.5	
	GUIDE SLEEVE POSITION
Rated speed rpm : 250	+
Deals described from a F-70	Rated speed rpm : 1175
Rack travel in mm: 5.70	Dock travel in the 1/ 50
Tolerance mm : + 0.20 Del. quantity	+ Rack travel in mm : 16.50 + Tolerance mm : +- 1.30
cm3/1000 strokes : 32.0	T roterance man . F- 7.50
Tolerance	
cm3/1000 strokes : + 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	-
cm3/1000s. : + 4.5	+ Rated speed rpm : 700
Spreed	+ Aneroid pressure
Tolerance	+ hPa : 1200
cm3/1000 strokes : 3.0	+ Del. quantity
Check tolerance	cm3/1000 strokes : 191.0
cm3/1000s. : 6.0	+ Tolerance + cm3/1000 strokes : +- 1.0
·	
(B) SETTING OF INJECTION DIMP	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ Check tolerance + cm3/1000s. : + 3.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000S. : + 3.0 Spreed
	+ Check tolerance + cm3/1000s. : + 3.0
	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
GUIDE SLEEVE TRAVEL	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 250	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25 Rated speed rpm : 387	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25 Rated speed rpm : 387 guide sleeve Rated speed rpm : 387 guide sleeve	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1135 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25 Rated speed rpm : 387 guide sleeve travel mm : 2.96 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1135 Tolerance 1/min : + 5 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25 Rated speed rpm : 387 guide sleeve travel mm : 2.96 Tolerance mm : + 0.25 Rated speed rpm : 2.96 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1135 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1240
GUIDE SLEEVE TRAVEL Rated speed rpm : 250 guide sleeve travel mm : 1.19 Tolerance mm : + 0.25 Rated speed rpm : 1146 guide sleeve travel mm : 7.81 Tolerance mm : + 0.25 Rated speed rpm : 1081 guide sleeve travel mm : 6.83 Tolerance mm : + 0.25 Rated speed rpm : 387 guide sleeve travel mm : 2.96 Tolerance mm : + 0.25	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 63.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1135 Tolerance 1/min : + 5 rack travel mm : 4.00

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	: 66.0 : + 4.0
control lever position degree tolerance degree	: 11.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 5.70 : + 0.10
Rated speed rpm	: 150
CRT mm min.	: > 6.70
Rated speed rpm	: 330
TORQUE CONTROL	<u> </u>
Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.30 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.30 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.15 : + 0.15
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 960 : 3.80 : +- 0.15

Pressure hPa : 240 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 113.0
Tolerance

cm3/1000 strokes : + 1.0 Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 13.30
Rated speed rpm : 1135
Tolerance 1/min : + 5

LOW IDLE

Rated speed rpm 250 rack travel mm 5.70 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 32.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.09.95 Test oil : ISO 4113

Combination No. : 0 401 876 312

Injection pump

Pump designation : PE6P110A32ORS492 EP type number : 0 411 816 161

Governor

Governer design. : RSV200...1100P1A305

: -6

Governer no. : 0 421 833 472

Cust. part No. : 847845 PO5 v. 12/94

Customer-spec. information

Customer : VOLVO-PENTA
Motor : TD71APP
Power KW : 165.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5 Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 11.55
Tolerance mm: + 0.05

Del. quantity cm3/1000 strokes : 110.0

Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : ← 3.0	
Spreed Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER control lever position degree : 54.0
Check tolerance cm3/1000s. : 7.5	control lever position degree : 104.0
Rated speed rpm : 200	RATED SPEED
Rack travel in mm: 5.50 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 19.0	rack travel mm : 10.50 Rated speed rpm : 1115 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : + 3.0 Spread Tolerance	rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control Lever position degree : 67.0
Rated speed rpm : 800	control lever position degree : 17.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Setting point w/out bumper spring
governor spring pre-tension click setting x : 4.30	Rated speed rpm : 200 rack travel mm : 5.00
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	Rated speed rpm : 200 rack travel mm : 5.50 Tolerance mm : + 0.10
Aneroid pressure hPa : - + Del. quantity +	rack travel mm : 2.00 Rated speed rpm : 310
cm3/1000 strokes : 110.0 + Tolerance + 1.0	Tolerance 1/min : +- 30 Rated speed rpm : 100
cm3/1000 strokes : +- 1.0 +- Check tolerance +- 7/1000s	Rated speed rpm : 100 CRT mm min. :> 19.50
cm3/1000s. : + 3.0 + Spreed + Tolerance	CK (1907 1911 191 191 20 20 20 20 20 20 20 20 20 20 20 20 20
cm3/1000 strokes : 4.0	TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 11.55 Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm: 10.50
Rated speed rpm: 1115
Tolerance 1/min: +- 5

LOW IDLE

200 Rated speed rpm rack travel mm : 5.50 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.10.95 Test oil : ISO 4113

Combination No. : 0 401 876 322

Injection pump

Pump designation : PE6P110A320RS497 EP type number : D 411 816 165

Governor

Governer design. : RSV200...1200P1A374

: -2

Governer no. : 0 421 833 205

Cust. part No. : 848719-P06

Customer—spec. information Customer : VOLVO Motor : TID 71A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5 Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

test only : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.75
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 139.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0	
Spreed Tolerance cm3/1000 strokes : 4.0	
Check tolerance cm3/1000s. 7.5	
Rated speed rpm : 200	
Rack travel in mm : 5.30 Tolerance mm : + 0.20 Del. quantity	
cm3/1000 strokes : 19.0 Tolerance	
cm3/1000 strokes : +- 2.0 Check tolerance	
cm3/1000s. : +- 4.5 Spreed	
Tolerance cm3/1000 strokes : 3.0	
Check tolerance cm3/1000s. : 6.0	
(B) SETTING OF INJECTION PUMP	
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 139.0	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 139.0 Tolerance	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 139.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 139.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	

control lever position degree tolerance degree	: 57.0 : ← 4.0
control lever position degree tolerance degree	: 107.0 : + 4.0
RATED SPEED	
rack travel mm Rated speed rpm Tolerance 1/min	: 11.70 : 1215 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 1275
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 1400
LOW IDLE	
control lever position degree tolerance degree	: 67.0 : ← 4.0
control lever position degree tolerance degree	: 17.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm	: 200 : 4.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 200 : 5.30 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 310 : + 30
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.75 : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 12.75
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.70
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 380
rack travel mm : 10.10
Tolerance mm : + 0.10

Pressure hPa : 900 rack travel mm : 12.45 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700
Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm: 11.70
Rated speed rpm: 1215
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 200.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 200
rack travel mm : 5.30
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 19.0
Tolerance
cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 4.5 Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.10.95 Test oil : ISO 4113

Combination No. : 0 401 876 761

Injection pump

Pump designation : PE6P12OA32ORS32O6 EP type number : 0 411 826 773

Governor

Governer design. : RSV250...900P4A374

overner no : -6

Governer no. : 0 421 833 283

Cust. part No. : 849623 PO3 v. 6/95

Customer-spec. information

Customer : VOLVO—PENTA
Motor : TAMD122 A
Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

∀ibration damper

(RoBo diaphragm): 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

test only $: \leftarrow 0.10$

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.75
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 276.5

,	
Tolerance ‡	
cm3/1000 strokes : + 1.0	
	CONTROL LEVER
Check tolerance	
cm3/1000s. : \leftarrow 4.0	control lever
	position degree : 54.0
Spreed	tolerance degree : $+$ 4.0
Tolerance + cm3/1000 strokes : 5.0	control lever
Timor rode serokes : 3.0	position degree : 104.0
Check tolerance	tolerance degree : + 4.0
cm3/1000s. : 9.0	
+	RATED SPEED
Rated speed rpm : 250	
†	rack travel mm : 10.70
Rack travel in mm: 5.10	Rated speed rpm : 930
Tolerance mm : + 0.20 + Del. quantity +	Tolerance 1/min : +- 5
cm3/1000 strokes : 20.0 +	rack travel mm : 4.00
Tolerance	Rated speed rpm : 1000
cm3/1000 strokes : + 3.0	Tolerance 1/min : + 15
Check tolerance	
cm3/1000s. : +- 6.0 +	rack travel mm : 0.85
Spreed	Tolerance mm : + 0.55
Tolerance +	Rated speed rpm : 1130
cm3/1000 strokes : 5.0	rack travel mm : 4.00
Check tolerance + cm3/1000s. : 7.0 +	Rated speed rpm : 1010
1.0	Naced Speed I pill . 1010
4	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	LOW IDLE
†	
	control lever
GUIDE SLEEVE POSITION	position degree : 72.0
-	tolerance degree : +- 4.0
Rated speed rpm : 800	
+	control lever
Rack travel in mm: 0.50	position degree : 22.0
Tolerance mm : + 0.20 +	tolerance degree : +- 4.0
T	Catting paint want human grains
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
THE ZOAD SECTIVE AT THE COAD STOT	Rated speed rpm : 250
Rated speed rpm : 700	rack travel mm : 4.60
Aneroid pressure +	
hPa : 1200 +	Testing:
Del. quantity +	
cm3/1000 strokes : 276.5	Rated speed rpm : 250
Tolerance + 1.0 +	rack travel mm : 5.10 Tolerance mm : + 0.10
cm3/1000 strokes : + 1.0 + Check tolerance +	Tolerance mm : \leftarrow 0.10
cm3/1000s. : + 4.0	rack travel mm : 2.00
Spreed +	Rated speed rpm : 410
Tolerance	Tolerance 1/min : + 30
cm3/1000 strokes : 5.0	· · · · · · · · · · · · · · · · · · ·
Check tolerance	
cm3/1000s. : 9.0 +	TORQUE CONTROL
Cili37 10003.	TOTAGE CONTINGE

Rated speed rpm	:		700
rack travel mm	:		11.75
Tolerance mm	: -	+	0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	700
Pressure hPa	:	1200
rack travel mm	:	11.75
Tolerance mm	; -	⊢ 0.05

MEASUREMENT

Pressure hPa	:	-
Rated speed rpm	:	700
rack travel mm	:	8.70
Tolerance mm	: +	- 0.10

Nated speed (bill	Rated	speed	rom	:	700
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Pressure hPa	:		770
rack travel mm	:		11.40
Tolerance mm	:	+	0.20

Pressure hPa	:	240
rack travel mm	:	8.95
Tolerance mm	: +-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa	:	~
Rated speed rpm	:	700
Del. quantity		

cm3/1000 strokes : 178.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm	:		10.70
Rated speed rpm	:		930
Tolerance 1/min	:	+	5

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	8.70
Tolerance mm	: +-	0.10

LOW IDLE

Rated speed rpm rack travel mm	: 250 : 5.10 : + 0.20
Tolerance mm Del. quantity	: +- 0.20
cm3/1000 strokes	: 20.0
Tolerance cm3/1000 strokes	
Check tolerance	: + 3.0
cm3/1000s.	: - 6.0
Spreed	
Tolerance cm3/1000 strokes	: 5.0
Check tolerance	. 3.0
cm3/1000s.	: 7.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.10.95 Test oil : ISO 4113

Combination No. : 0 401 876 777

Injection pump

Pump designation : PE6P12OA32ORS3261 EP type number : 0 411 826 796

Governor

Governer design. : RSV250...1100P0A374

: -11

Governer no. : 0 421 833 346

Cust. part No. : 864451 PO4 v. 6/95

Customer—spec. information Customer : PENTA

Motor : TAMD 102 A

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration damper

(RoBo diaphragm): 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 067

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 1000

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REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 3.45
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.15
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 260.0

_	+ Tolerance
Tolerance -	- cm3/1000 strokes : 5.0
cm3/1000 strokes : +- 1.0	- Check tolerance
	- cm3/1000s. : 9.0
Check tolerance -	+
cm3/1000s. : +- 4.0	+
Spreed	CONTROL LEVER
Tolerance -	
cm3/1000 strokes : 5.0	control lever
Check tolerance -	position degree : 44.0 tolerance degree : +- 4.0
cm3/1000s. : 9.0 -	Locerance degree . 4.0
	control lever
Rated speed rpm : 250	position degree : 94.0
Tuttu opota i pin i est	tolerance degree : + 4.0
Rack travel in mm: 6.50 -	+
Tolerance mm : + 0.20	RATED SPEED
Del. quantity	
cm3/1000 strokes : 23.0	rack travel mm : 11.10
Tolerance	Rated speed rpm : 1145
cm3/1000 strokes : + 3.0	Tolerance 1/min : + 5
Check tolerance	
cm3/1000s. : +- 6.0	rack travel mm : 4.00
Spreed	Rated speed rpm : 1210
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : 5.0	0.05
Check tolerance	rack travel mm : 0.85
cm3/1000s. : 7.0	Tolerance mm : +- 0.55 Rated speed rpm : 1350
	+ kated speed rom : 1550
	1
(R) SETTING OF INJECTION PHMP	•
(B) SETTING OF INJECTION PUMP -	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
· · · · · · · · · · · · · · · · · · ·	rack travel mm : 4.00
WITH GOVERNOR -	rack travel mm : 4.00 Rated speed rpm : 1220
· · · · · · · · · · · · · · · · · · ·	rack travel mm : 4.00
GUIDE SLEEVE POSITION	rack travel mm : 4.00 Rated speed rpm : 1220
WITH GOVERNOR -	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE
GUIDE SLEEVE POSITION Rated speed rpm : 800	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0
GUIDE SLEEVE POSITION Rated speed rpm : 800	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : +- 4.0 control lever
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : +- 4.0 control lever
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00 Testing:
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 260.0	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00 Testing: Rated speed rpm : 250
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 260.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00 Testing: Rated speed rpm : 250 rack travel mm : 6.50
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00 Testing: Rated speed rpm : 250
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00 Testing: Rated speed rpm : 250 rack travel mm : 6.50 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 4.00 Rated speed rpm : 1220 LOW IDLE control lever position degree : 69.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 250 rack travel mm : 6.00 Testing: Rated speed rpm : 250 rack travel mm : 6.50

Tolerance 1/min : +-20 TORQUE CONTROL Rated speed rpm 700 rack travel mm 12.15 Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa 1500 rack travel mm 12.15 Tolerance mm : + 0.05**MEASUREMENT** Pressure hPa 500 Rated speed rpm 8.10 rack travel mm Tolerance mm : + 0.10Rated speed rpm 500 Pressure hPa 1030 rack travel mm 3.60 : + 0.10Tolerance mm Pressure hPa 140 rack travel mm 0.25 Tolerance mm : + - 0.05FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 700 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 BREAKAWAY

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 17.00 Tolerance mm : +- 1.00

LOW IDLE

Rated speed rpm	:	250	
rack travel mm	:	6.50	
Tolerance mm	: +-	0.20	
Del. quantity			
cm3/1000 strokes	:	23.0	
Tolerance			
cm3/1000 strokes	: +-	3.0	
Check tolerance			
cm3/1000s.	: +-	6.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	5.0	
Check tolerance			
cm3/1000s.	:	7.0	

End of test specification sheet

Rack trowel in mm:

Rated speed rpm : 1145
Tolerance 1/min : +

11.10

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 30,10,95 Edition : ISO 4113 Test oil Combination No. : 0 401 876 803 Injection pump Pump designation : PE6P110A320RS3266 EP type number : 0 411 816 777 Governor Governer design. : RSV350...1250P0A578 Governer no. : 0 421 833 434 Cust. part No. : 866200-P03 v. 4/94 Customer-spec. information Customer : PENTA : TWD 630ME Motor TEST BENCH REQUIREMENTS Inlet line : 3.1 Vibration damper (RoBo diaphragm) : 4.2 Test oil inlet temp. °C Tolerance *C : + 2.0 Overflow valve : 2 417 413 046 Inlet press. bar : Tolerance bar : + 0.1 Test nozzle holde : 1 688 901 101 assembly

208.5

Outside diameter : 6.0 x inside diameter: 2.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : Tolerance bar : + 1.0 Prestroke mm 2,45 : + 0.05 Tolerance mm test only : + 0.10 Rack travel in mm: 10.50 : +- 1.50 Tolerance mm : 1-5-3-6-2-Firing order Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.30 Check tolerance NW : + 0.75 BASIC SETTING Rated speed rpm 700 Rack travel in mm: 12.00 : + 0.05 Tolerance mm Del. quantity cm3/1000 strokes : 133.0 Tolerance cm3/1000 strokes : +- 1.0

Test lines : 1 680 750 008

Opening pressure

Tolerance bar : + 1.5

Check tolerance cm3/1000s.	: +- 3.0
Spreed Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP
GUIDE SLEEVE POSIT	LION
Rated speed rpm	: 800
Rack travel in mm Tolerance mm	: 0.50 : +- 0.20
governor spring pre-tension click setting x	: 2.50
FULL LOAD DELIVERY	AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 700
hPa Del. quantity	: 1200
cm3/1000 strokes Tolerance	: 133.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000S. Spreed	: ← 3.0
	: 5.0
Check tolerance cm3/1000s.	: 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 46.0 : + 4.0
control lever position degree tolerance degree	: 96.0 : + 4.0
RATED SPEED	

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 1270 : + 5 : 4.00 : 1305 : + 15 : 0.85 : + 0.55
LOW IDLE	
control lever position degree tolerance degree	: 68.0 : +- 4.0
control lever position degree tolerance degree	: 18.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm	: 350 : 5.60
Testing:	
rack travel mm Rated speed rpm Tolerance 1/min	: 410
SET IDLE AUXILIAR	Y SPRING
rack travel mm	: 2.00
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 12.00 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 9.60 : + 0.20

Rated speed rpm : 500 Pressure hPa 1.90 rack travel mm : +- 0.10 Tolerance mm 230 Pressure hPa rack travel mm 0.20 : +- 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 700 Rated speed rpm : Del. quantity cm3/1000 strokes : 80.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. 4.0 **BREAKAWAY** Rack travel in mm : 11.00 Rated speed rpm : 1270 Tolerance 1/min : +-STARTING FUEL DELIVERY 100 Rated speed rpm : 20.50 rack travel mm : : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 190.0 Tolerance cm3/1000 strokes : + 10.0Check tolerance cm3/1000s. : + 14.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.10.95 Edition : ISO 4113 Test oil

Combination No. : 0 402 044 700

Injection pump

Pump designation : PES4P110A320RS3350 EP type number : 0 412 014 700

Governor

Governer design. : RQV350...1400PA1221K

Governer no. : 0 421 815 472

Cust. part No. : 16700-08703 / M

: -2004

Customer-spec. information

Customer : NMI

: B4.40 EURO II Motor

Power KW : 101.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 4-2-1-3

: 0-90-180-270 Phasing : + 0.30

Tolerance Check

Check

tolerance °NW : +- 0.50

Start of delivery mark

*NW after s.o.d. : 180.00

Barrel no. : 4

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 15.40 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 178.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s.	: +- 3.0
Spreed Tolerance cm3/1000 strokes	; 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 350
Rack travel in m Tolerance mm Del. quantity	9.50 : + 0.30
cm3/1000 strokes Tolerance	: 31.0
cm3/1000 strokes Check tolerance	: +- 2.5
cm3/1000s. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 10.0
(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP
GUIDE SLEEVE TRAV	/EL
Rated speed rpm guide sleeve	: 350
Rated speed rpm	
Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.46 : + 0.20
Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.46 : + 0.20
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 350 : 1.46 : + 0.20 : 1417 : 9.99 : + 0.15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 350 : 1.46 : + 0.20 : 1417 : 9.99 : + 0.15 : 994 : 6.77
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 350 : 1.46 : ← 0.20 : 1417 : 9.99 : ← 0.15 : 994 : 6.77 : ← 0.25
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve	: 350 : 1.46 : + 0.20 : 1417 : 9.99 : + 0.15 : 994 : 6.77 : + 0.25 : 610
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm	: 350 : 1.46 : ← 0.20 : 1417 : 9.99 : ← 0.15 : 994 : 6.77 : ← 0.25
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.46 : + 0.20 : 1417 : 9.99 : + 0.15 : 994 : 6.77 : + 0.25 : 610 : 3.96 : + 0.25
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.46 : + 0.20 : 1417 : 9.99 : + 0.15 : 994 : 6.77 : + 0.25 : 610 : 3.96 : + 0.25 : 1730 : 13.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.46 : + 0.20 : 1417 : 9.99 : + 0.15 : 994 : 6.77 : + 0.25 : 610 : 3.96 : + 0.25 : 1730

Rated speed rpm	: 1515
Rack travel in mm Tolerance mm	14.50 : +- 1.30
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 5.0 : 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 65.0 : + 4.0
control lever position degree tolerance degree	: 122.0 : + 4.0
RATED SPEED	
rack travel mm Rated speed rpm Tolerance 1/min	: 14.40 : 1410 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1585 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1640
LOW IDLE	
control lever position degree tolerance degree	: 82.0 : ← 4.0

control lever		+	Pressure hPa	: 520
position degree tolerance degree		†	rack travel mm Tolerance mm	: 13.25 : + 0.05
Testing:		1	START CUT-OUT	
Rated speed rpm rack travel mm		<u>†</u>	Rated speed rpm	: > 270
Tolerance mm		Ŧ	Check	
Rated speed rpm	: 250	Ŧ	speed 1/min	: > 290
CRT mm min.	: > 10.80	Ī	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 500	1	Aneroid pressure	: 1500
TARALE AGUERAL			Rated speed rpm	
TORQUE CONTROL	4700	. ‡	Del. quantity cm3/1000 strokes	: 154.0
Rated speed rpm rack travel mm	: 15.40	‡	Tolerance cm3/1000 strokes	: + 2.0
Tolerance mm	: +- 0.05	<u>†</u>	Check tolerance cm3/1000S.	: +- 5.0
Rated speed rpm	: 780	+	Spreed	
rack travel mm Tolerance mm	: 13.70 : + 0.15	‡	Tolerance cm3/1000 strokes	: 8.0
Rated speed rpm	: 1000	<u> </u>	Check tolerance cm3/1000S.	: 12.0
rack travel mm	: 14.30	+		
Tolerance mm		‡	Aneroid pressure hPa	: 1500
Rated speed rpm rack travel mm		<u>†</u>	Rated speed rpm Del. quantity	: 1000
Tolerance mm	: + 0.10	Ŧ	cm3/1000 strokes	: 165.0
		‡	Tolerance cm3/1000 strokes	: + 3.0
ANEROID/ALTITUDE COMPENSATOR TEST		+	Check tolerance cm3/1000s.	: + 6.0
		‡	Aneroid pressure	
SETTING		‡	hPa Rated speed rpm	500
Rated speed rpm Pressure hPa	: 1300 : 1500	‡	Del. quantity cm3/1000 strokes	: 136.0
rack travel mm	: 15.40 : + 0.10	+	Tolerance	
Tolerance mm	: +- 0.70	‡	cm3/1000 strokes Check tolerance	
MEASUREMENT		‡	cm3/1000s.	: +- 4.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		‡	BREAKAWAY	
Rated speed rpm		+	Rack travel in mm Rated speed rpm	
Pressure hPa	: 940	<u>†</u>	Tolerance 1/min	: +- 5
rack travel mm Tolerance mm	: 14.45 : + 0.10	Ī		

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity

cm3/1000 strokes : 220.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance cm3/1000s. : + 19.0

LOW IDLE

350 Rated speed rpm 9.50 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 31.0 Tolerance cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.10.95 Test oil : ISO 4113

Combination No. : 0 402 076 758

Injection pump

Pump designation : PES6P12OA72ORS3322 EP type number : 0 412 026 764

Governor

Governer design. : RSV650...1250P8A566

Governer no. : 0 421 833 415

Cust. part No.

Customer-spec. information

Customer : FNH-GEOTECH

Power KW : 164.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter: 8.0

x inside diameter: 2.5

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.05

Tolerance mm : \leftarrow 0.05

Dei. quantity

cm3/1000 strokes : 131.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance cm3/1000 strokes : 5.	o 1	RATED SPEED	
Check tolerance	<u> </u>	Rated speed rpm	: 1330
cm3/1000s. : 9.	0	Navoa oposa (p.iii	,,,,,,
Del. quantity cm3/1000 strokes : 19.	0 ‡	Rated speed rpm	
Tolerance cm3/1000 strokes : +- 3.	0 ‡	rack travel mm	: 9.05
Check tolerance cm3/1000s. : + 6. Spreed	0 ‡	Rated speed rpm Tolerance 1/min rack travel mm	: +- 5
Tolerance cm3/1000 strokes : 8. Check tolerance	o ‡	rack travel mm	: 0.85 : + 0.55
cm3/1000s. : 12.	0	Tolerance mm Rated speed rpm	
(B) SETTING OF INJECTION PU WITH GOVERNOR	MP	Rated speed rpm rack travel mm	
	+	Rated speed rpm Tolerance 1/min rack travel mm	: 1326 : + 5 : 4.00
GUIDE SLEEVE POSITION	‡	rack travel mm	: 0.85
Rated speed rpm : 800	‡	Tolerance mm	: +- 0.55
Rack travel in mm: 0.5 Tolerance mm: \div 0.2		Rated speed rpm rack travel mm	: 1295 : 9.05
governor spring pre-tension	‡	Rated speed rpm Tolerance 1/min	: 1327 : + 5
click setting x : 1.7	5	rack travel mm	: 4.00
FULL LOAD DELIVERY AT FULL	LOAD STOP	rack travel mm Tolerance mm	: 0.85 : +- 0.55
Rated speed rpm : 1250 Aneroid pressure	‡	Rated speed rpm rack travel mm	
hPa : 1000 Del. quantity	‡	Rated speed rpm	: 1328
cm3/1000 strokes : 131.0	• ‡	Tolerance 1/min rack travel mm	: + 5 : 4.00
cm3/1000 strokes : + 1.0 Check tolerance	1	rack travel mm	: 0.85
cm3/1000s. : +- 4.0 Spreed	1	Tolerance mm	: +- 0.55
Tolerance cm3/1000 strokes : 5.0	†	Rated speed rpm rack travel mm	: 1297 : 9.05
Check tolerance cm3/1000s. : 9.0)	Rated speed rpm Tolerance 1/min rack travel mm	: 1329 : ← 5 : 4.00
CONTROL LEVER	†	rack travel mm Tolerance mm	: 0.85 : + 0.55
control lever position degree : 112.0 tolerance degree : + 4.0		Rated speed rpm rack travel mm	: 1298 : 9.05

Rated speed rpm	: 1330
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
LOW IDLE	
control lever position degree tolerance degree	: 85.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 650
rack travel mm	: 4.30
Testing:	
Rated speed rpm	: 650
rack travel mm	: 4.80
Tolerance mm	: + 0.10
rack travel mm	: 2.00
Rated speed rpm	: 770
Tolerance 1/min	: + 50
TORQUE CONTROL	
Rated speed rpm	: 1250
rack travel mm	: 10.05
Tolerance mm	: + 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 1160
rack travel mm	: 10.35
Tolerance mm	: + 0.10
Rated speed rpm	: 1250
rack travel mm	: 9.55
Tolerance mm	: + 0.05
Rated speed rpm	: 700
rack travel mm	: 10.60
Tolerance mm	: + 0.10
ANEROID/ALTITUDE	

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 10.60 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 7.60 : + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 560 : 9.80 : + 0.05
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1000 : 900 : 144.5 : + 3.0
cm3/1000s.	: + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 83.0 : + 1.0 : + 4.0
STARTING FUEL DEL	TVFRY
Dal mundah	un 10 Nun 1 1 6

Del. quantity
cm3/1000 strokes : 215.0
Tolerance
cm3/1000 strokes : +- 15.0
Check tolerance
cm3/1000s. : +- 19.0

LOW IDLE

COMPENSATOR TEST

Del. quantity		
cm3/1000 strokes	:	19.0
Tolerance		
cm3/1000 strokes	: +	3.0
Check tolerance		
cm3/1000s.	: +	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	•	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.10.95 Test oil : ISO 4113

Combination No. : 0 402 646 632

Injection pump

Pump designation : PE6P120A320RS7233

: -11

EF type number : 0 412 626 919

Governor

Governer design. : RQV300...1300PA1094K

Governer no. : 0 421 815 364

Cust. part No. : 866560 PO3 v. 4/95

Customer—spec. information
Customer : PENTA
Motor : TAMD 72 A
Power KW : 316.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

• 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance 'NW : \leftarrow 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.85 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 250.0	‡
Tolerance cm3/1000 strokes	: + 1.0	‡
Check tolerance cm3/1000s.	: + 4.0	Ŧ
Spreed Tolerance cm3/1000 strokes	: 8.0	T + +
Check tolerance cm3/1000S.	: 11.0	†
(B) SETTING OF IN	NJECTION PUMP	+++++++++++++++++++++++++++++++++++++++
GUIDE SLEEVE TRAN	/EL	Ŧ
Rated speed rpm	: 300	Ŧ
guide sleeve	. 4 45	Ť
travel mm Tolerance mm	: 1.65 : + 0.25	Ī
rocerance mm	. + 0.23	I
Rated speed rpm	: 1345	1
guide sleeve		1
travel mm	: 10.25	1
Tolerance mm	: 0.25	+
Rated speed rpm guide sleeve	: 899	‡
travel mm	: 6.99	I
Tolerance mm	: +- 0.25	I
, occi arioc imi		1
Rated speed rpm guide sleeve	: 387	‡
travel mm	: 2.54	+
Tolerance mm	: + 0.25	†
Rated speed rpm guide sleeve	: 437	Ī
travel mm	: 3.05	+
Tolerance mm	: +- 0.25	+
Rated speed rpm guide sleeve	: 530	Ī
travel mm	: 4.12	1
Tolerance mm	: +- 0.25	1
		+
Rated speed rpm guide sleeve	: 1640	I
travel mm	: 13.50	I
Tolerance mm	: +- 0.50	1
, week drive lipit		1
		+
GUIDE SLEEVE POSI	TION	+

Rack travel in ma	9.00 : + 3.00
	: 3.00
FULL LOAD DELIVER	RY AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1300
hPa Del. quantity	: 2400
cm3/1000 strokes Tolerance	: 250.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s. Spreed	: + 4.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 11.0
CONTROL LEVER	
control lever	
position degree tolerance degree	: 66.0 : + 4.0
control lever position degree	: 120.0
tolerance degree	: + 4.0
RATED SPEED	
rack travel mm Rated speed rpm	
Tolerance 1/min	: +- 5
rack travel mm Rated speed rpm	: 4.00 : 1495
Tolerance 1/min	: + 15
rack travel mm Tolerance mm	: 0.50 : + 0.50
Rated speed rpm	: 1600
LOUITNE	
LOW IDLE	
control lever position degree	. 73.0
tolerance degree	: 73.0 : +- 4.0

Rated speed rpm : 1500

control lever position degree tolerance degree	: 20.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 200
CRT mm min.	: > 6.70
Rated speed rpm	: 400
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.70 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
COMPENSATOR TEST	: 1300 : 2400 : 13.85 : ← 0.05
SETTING Rated speed rpm Pressure hPa rack travel mm	: 2400 : 13.85
COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 2400 : 13.85
COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 2400 : 13.85 : + 0.05 : - : 1300 : 7.60
COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 2400 : 13.85 : + 0.05 : - 1300 : 7.60 : + 0.10

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 2400 : 800
cm3/1000 strokes	: 236.0
Tolerance cm3/1000 strokes	: + 3.0
Check tolerance cm3/1000s. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 10.0
Check tolerance cm3/1000S.	: 14.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 2400 : 1000 : 244.0 : + 4.0 : + 6.0 : 500 : 124.0 : + 1.0 : + 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.80 : 1340 : + 5

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.10.95 Test oil : ISO 4113

Combination No. : 0 402 646 665

Injection pump

Pump designation : PE6P130A720RS7354 EP type number : 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -3K

Governer no. : 0 421 815 491

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8210.42K.300

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm : 12.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

Check

tolerance *NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 12.05
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 244.0

Tolerance

cm3/1000 strokes : + 1.0

		_ †
Check tolerance cm3/1000s.	: + 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance		Rated speed rpm : 1200
cm3/1000 strokes	: 5.0	Rack travel in mm: 11.00 Tolerance mm: + 2.70
Check tolerance cm3/1000s.	: 9.0	
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
		+ Rated speed rpm : 950
Rack travel in mn		+ Aneroid pressure
Tolerance mm	: ÷ 0.20	hPa : 900
Del. quantity	22.0	+ Del. quantity
cm3/1000 strokes	: 22.0	+ cm3/1000 strokes : 244.0
Tolerance		Tolerance
cm3/1000 strokes	: + 3.0	+ cm3/1000 strokes : + 1.0
Check tolerance	4.0	Check tolerance
cm3/1000s.	: ← 6.0	+ cm3/1000s. : + 4.0
Spreed Tolerance		+ Spreed + Tolerance
cm3/1000 strokes	: 8.0	+ cm3/1000 strokes : 5.0
Check tolerance	. 0.0	Check tolerance
cm3/1000s.	: 12.0	- cm3/1000s. : 9.0
(B) SETTING OF IN	LIECTION DIMP	1
GUIDE SLEEVE TRAV		control lever position degree : 114.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	/EL : 300	control lever position degree : 114.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	/EL : 300 : 1.64	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	/EL : 300	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	/EL : 300 : 1.64 : ← 0.20 : 1025	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	/EL : 300 : 1.64 : ← 0.20 : 1025	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : 6.22	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : ← 6.22 : ← 0.25 : 500	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : 6.22 : ← 0.25	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : ← 6.22 : ← 0.25 : 500 : 3.78	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1250 LOW IDLE control lever
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : 6.22 : ← 0.25 : 500 : 3.78 : ← 0.25 : 1330	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1250 LOW IDLE control lever position degree : 71.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : 6.22 : ← 0.25 : 500 : 3.78 : ← 0.25	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1250 LOW IDLE control lever position degree : 71.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 300 : 1.64 : ← 0.20 : 1025 : 9.00 : ← 0.15 : 764 : 6.22 : ← 0.25 : 500 : 3.78 : ← 0.25 : 1330 : 13.50	control lever position degree : 114.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 1015 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1250 LOW IDLE control lever position degree : 71.0

Rated speed rpm rack travel mm Tolerance mm	: +- 0.10
Rated speed rpm	: 200
CRT mm min.	: > 6.30
Rated speed rpm	: 355
TORQUE CONTROL	
Rated speed rpm	: 950 : 12.05
rack travel mm Tolerance mm	: + 0.05
Rated speed rpm	
rack travel mm Tolerance mm	: 11.85 : + 0.10
Rated speed rpm	
rack travel mm Tolerance mm	: 11.50 : + 0.10
Rated speed rpm	: 300
Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST	
rack travel mm Tolerance mm ANEROID/ALTITUDE	: 10.90
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: 10.90 : + 0.30
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING	: 10.90 : + 0.30
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 10.90 : + 0.30 : 950 : 900
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 10.90 : + 0.30 : 950 : 900 : 12.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05
rack travel mm Tolerance mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05 :05 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05 : + 0.20 : 950 : 950
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05 : + 0.05 : + 0.20 : 950 : 950 : 290
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05 : + 0.20 : 950 : 950
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 10.90 : + 0.30 : 950 : 900 : 12.05 : + 0.05 :05 :05 : 950 : 8.50 : + 0.20 : 950 : 950

Rated speed rpm Check	: < 220
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 900
Rated speed rpm Del. quantity	: 550
cm3/1000 strokes Tolerance cm3/1000 strokes	: 264.0 : +- 3.0
Check tolerance cm3/1000s.	: +- 6.0
Aneroid pressure	
hPa Rated speed rpm Del. quantity	550
cm3/1000 strokes Tolerance	: 174.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 11.00 : 1015 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.25 : + 0.75
Del. quantity cm3/1000 strokes Tolerance	: 150.0
cm3/1000 strokes Check tolerance	
cm3/1000s.	: + 19.0

LOW IDLE

Rated speed rpm : 300 rack travel mm : 4.80 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 22.0

Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.10.95 Test oil : ISO 4113

Combination No. : 0 403 466 176

Injection pump

Pump designation : PES6MW100/120RS1240 EP type number : 0 413 406 239

Governor

Governor design. : RSV450...1000MW2A396

Governer no. : 0 420 085 284

Cust. part No. : 3929174

Customer—spec. information Customer : CDC

Motor : 6 CT-830
Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

test only : \leftarrow 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.40 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 146.0

Tolerance

cm3/1000 strokes : +- 1.0

<u></u>	- Check tolerance
Check tolerance cm3/1000s. : + 4.0	- cm3/1000s. : 7.5
Spreed	
Tolerance cm3/1000 strokes : 4.0	- CONTROL LEVER
Check tolerance	- control lever - position degree : 93.0
cm3/1000s. : 7.5	tolerance degree : +- 4.0
Rated speed rpm : 400	RATED SPEED
Rack travel in mm: 5.50	rack travel mm : 11.40
Tolerance mm : +- 0.50	Rated speed rpm : 1045
Del. quantity	Tolerance 1/min : + 5
cm3/1000 strokes : 20.0	made through the control of the cont
Tolerance + 2.0 +	rack travel mm : 4.00 Rated speed rpm : 1125
Check tolerance	. Nated speed (pill . 1123
cm3/1000s. : +- 4.5	rack travel mm : 0.85
Spreed	Tolerance mm : + 0.55
Tolerance	Rated speed rpm : 1300
cm3/1000 strokes : 3.5	rack travel mm : 4.00
cm3/1000s. : 5.5	Rated speed rpm : 1135
#	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
+	
GUIDE SLEEVE POSITION	control lever position degree : 74.0
GOIDE SLEEVE POSITION	tolerance degree : + 4.0
Rated speed rpm : 800	
Rack travel in mm: 0.65	
RACK TRAVEL BRIDE U.DD **	Testing:
Tolerance mm : + 0.35	Rated speed rpm : 400
Tolerance mm : + 0.35 governor spring	
Tolerance mm : + 0.35 governor spring pre-tension	Rated speed rpm : 400 rack travel mm : 5.00
Tolerance mm : + 0.35 governor spring	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10
Tolerance mm : + 0.35 governor spring pre-tension	Rated speed rpm : 400 rack travel mm : 5.00
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : + 0.05
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : + 0.05 Rated speed rpm : 750
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 12.40
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : + 0.05 Rated speed rpm : 750
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : 750 rack travel mm : 12.40 Tolerance mm : 12.40 Tolerance mm : 0.10
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : 750 rack travel mm : 12.40 Tolerance mm : 12.40 Tolerance mm : 0.10 ANEROID/ALTITUDE
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : 750 rack travel mm : 12.40 Tolerance mm : 12.40 Tolerance mm : 0.10
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : 750 rack travel mm : 12.40 Tolerance mm : 12.40 Tolerance mm : 0.10 ANEROID/ALTITUDE
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 12.40 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST
Tolerance mm : + 0.35 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 146.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.40 Tolerance mm : 750 rack travel mm : 12.40 Tolerance mm : 12.40 Tolerance mm : 0.10 ANEROID/ALTITUDE

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 12.40 : ← 0.10	
MEASUREMENT		
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.00 : + 0.05	
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 750 : 12.00 : + 0.15	
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.30 : + 0.10	
FUEL DELIVERY CHA		
Aneroid pressure hPa Rated speed rpm	RACTERISTICS : 1200 : 750	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200	
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 750	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 750 : 150.0	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 750 : 150.0 : +- 2.0	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 750 : 150.0 : ← 2.0 : ← 5.0	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 1200 : 750 : 150.0 : + 2.0 : + 5.0 : 6.0 : 9.0	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1200 : 750 : 150.0 : + 2.0 : + 5.0 : 6.0	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 750 : 150.0 : + 2.0 : + 5.0 : 6.0 : 9.0	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Appreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 750 : 150.0 : + 2.0 : + 5.0 : 6.0 : 9.0	

Rack travel in mm: 11.40
Rated speed rpm: 1045
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 170.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0

LOW IDLE

Rated speed rpm : 400 5.50 rack travel mm Tolerance mm 0.50 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12,07,95 : ISO 4113

Combination No. : 0 403 244 032A

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

EP type number

: 0 413 204 017

Governor

Governer design. : RQV300...1300MW132

: -1

Governer no.

: 0 420 083 292

Cust. part No. : 0240741102

Customer-spec. information : MB-NFZ Customer : 0M364LA Motor

Power KW

: 103.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C Tolerance *C

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 4.55 Tolerance mm : + 0.05Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

: 1-3-4-2 Firing order

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance "NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1240

Rack travel in mm : 13.60 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 123.0

Tolerance

cm3/1000 strokes : +-

1.0

Check tolerance cm3/1000s.

4.0

Spreed Tolerance

cm3/1000 strokes :

5.0

Check tolerance cm3/1000s. : 8.0 Rated speed rpm : 300	Rack travel in mm : 10.00 Tolerance mm : +- 2.00
Rack travel in mm : 3.90 Tolerance mm : + 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 12.0 Tolerance	+ Rated speed rpm : 1240 + Aneroid pressure + hPa : 1200
cm3/1000 strokes : +- 2.0 Check tolerance	+ Del. quantity + cm3/1000 strokes : 123.0
cm3/1000s. : +- 4.5 Spreed Tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0 - Check tolerance
cm3/1000 strokes : 2.0 Check tolerance	cm3/1000s. : + 4.0 Spreed
cm3/1000s. : 4.0	Tolerance cm3/1000 strokes : 5.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000s. : 8.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
	
Rated speed rpm : 300 guide sleeve	+ control lever + position degree : 111.0
travel mm : 0.91 Tolerance mm : +- 0.20	tolerance degree : +- 4.0
	RATED SPEED
Rated speed rpm : 1353 guide sleeve	+ + rack travel mm : 12.60
travel mm : 7.02	+ Rated speed rpm : 1285
Tolerance mm : + 0.15	† Tolerance 1/min : + 10
Rated speed rpm : 1090	rack travel mm : 4.00
guide sleeve travel mm : 5.21	+ Rated speed rpm : 1445 + Tolerance 1/min : +- 5
Tolerance mm : +- 0.25	+
Rated speed rpm : 790	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
guide sleeve	+ Rated speed rpm : 1550
travel mm : 3.98 Tolerance mm : + 0.25	<u> </u>
Rated smeed rpm : 1759 guide sleeve	LOW IDLE
travel mm : 12.00	†
Tolerance mm : +- 0.25	control lever position degree : 74.0
Rated speed rpm : 1870 guide sleeve	tolerance degree : +- 4.0
travel mm : 13.50	† Testing:
Tolerance mm : +- 0.50	Rated speed rpm : 300
GUIDE SLEEVE POSITION	rack travel mm : 3.90 Tolerance mm : + 0.10
Rated speed rpm : 1500	Rated speed rpm : 200

CRT mm min.	: > 4.70	+ Del. quantity + cm3/1000 strokes : 121.0 + Tolerance
TORQUE CONTROL		cm3/1000 strokes : + 2.0 Check tolerance
Rated speed rpm rack travel mm		+ cm3/1000s. : ← 5.0 + Spreed + Tolerance
Tolerance mm	: + 0.05	cm3/1000 strokes : 6.0 check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.60	+ cm3/1000s. : 9.0
iolerance mm	: + 0.10	+ Aneroid pressure + hPa : -
		Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 67.0
COMPENSATOR 1631		Tolerance
OF TTTALO		+ cm3/1000 strokes : + 1.0
SETTING		+ Check tolerance + cm3/1000s. : + 3.0
Rated speed rpm	: 500	
Pressure hPa rack travel mm		BREAKAWAY
Tolerance mm	: + 0.05	OKEANA!
MEASUREMENT		Rack travel in mm: 12.60
Pressure hPa	: -	+ Rated speed rpm : 1285 + Tolerance 1/min : +- 10
Rated speed rpm		+
Tolerance mm	: +- 0.10	
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa	: 600	Rated speed rpm : 100
rack travel mm Tolerance mm	: 2.00 : + 0.10	+ Del. quantity + cm3/1000 strokes : 150.0
roceratice time	0.10	+ Tolerance
Pressure hPa	; 350	- cm3/1000 strokes : + 5.0
rack travel mm Tolerance mm	: 0.50 : + 0.10	+ Check tolerance + cm3/1000s. :+- 8.0
START CUT-OUT		
Rated speed rpm	: > 100	LOW IDLE
Rated speed rpm	: < 200	Poted and non a 300
Check		+ Rated speed rpm : 300 + rack travel mm : 3.90
speed 1/min	: > 80	+ Tolerance mm : + 0.10
Check	: < 220	+ Del. quantity + cm3/1000 strokes : 12.0
speed 1/min	. > 220	+ cm3/1000 strokes : 12.0 + Tolerance
FUEL DELIVERY CHA	ARACTERISTICS	+ Check tolerance
Anonaid manner		+ cm3/1000s. : +- 4.5 + Spreed
Aneroid pressure hPa	: 1200	Tolerance
Rated speed rpm	600	cm3/1000 strokes : 2.0
		+

Check tolerance cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.07.95 Edition Test oil : ISO 4113

Combination No. : 0 403 244 033A

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

EP type number : 0 413 204 017

Governor

Governer design. : RQV300...1300MW132

: -1

: 0 420 083 292 Governer no.

Cust. part No. : 0240748202

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : ← 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasina Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1240

Rack travel in mm: 13.60 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 123.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.	: 8.0	Rack travel in mm : 10.00
Rated speed rpm	: 300	Tolerance mm : + 2.00
Rack travel in m Tolerance mm	7 : 3.90 : + 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes	: 12.0	Rated speed rpm : 1240 Aneroid pressure
Tolerance cm3/1000 strokes	: + 2.0	hPa : 1200 Del. quantity
Check tolerance cm3/1000s.	: ← 4.5 [†]	cm3/1000 strokes : 123.0 Tolerance
Spreed Tolerance	‡	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes Check tolerance	+	cm3/1000s. : +- 4.0 Spreed
cm3/1000s.	: 4.0	Tolerance cm3/1000 strokes : 5.0
(B) SETTING OF I	NUECTION PUMP	Check tolerance : 8.0
WITH GOVERNOR	‡	
GUIDE SLEEVE TRAV	/EL +	CONTROL LEVER
Rated speed rpm guide sleeve	: 300	control lever position degree : 111.0
travel mm	: 0.91 : + 0.20	tolerance degree : + 4.0
Tolerance mm	+	RATED SPEED
Rated speed rpm guide sleeve	+	rack travel mm : 12.60
travel mm Tolerance mm	: 7.02 : ← 0.15	Rated speed rpm : 1285 Tolerance 1/min : +- 10
Rated speed rpm	: 1090	rack travel mm : 4.00
guide sleeve travel mm	: 5.21	Rated speed rpm : 1445 Tolerance 1/min : +- 5
Tolerance mm	: ← 0.25	rack travel mm : 0.50
Rated speed rpm guide sleeve	: 790	Tolerance mm : +- 0.50 Rated speed rpm : 1550
travel mm	: 3.98	Mateu Speed I piii . 1330
Tolerance mm	: + 0.25	
Rated speed rpm guide sleeve	: 1759	LOW IDLE
travel mm	: 12.00	
Tolerance mm	: + 0.25	control lever position degree : 74.0
Rated speed rpm guide sleeve	: 1870	tolerance degree : + 4.0
travel mm	: 13.50	Testing:
Tolerance mm	: + 0.50	Rated speed rpm : 300
GUIDE SLEEVE POSI	TION	rack travel mm : 3.90 Tolerance mm : +- 0.10
Rated speed rpm	: 1500	Rated speed rpm : 200

CRT mm min. : > 4.70	+ Del. quantity + cm3/1000 strokes : 121.0
	+ Tolerance + cm3/1000 strokes : + 2.0
TORQUE CONTROL	+ Check tolerance + cm3/1000s. : +- 5.0
Rated speed rpm : 1240	Spreed
rack travel mm : 13.60	+ Tolerance
Tolerance mm : +- 0.05	+ cm3/1000 strokes : 6.0 + Check tolerance
Rated speed rpm : 600	cm3/1000s. : 9.0
rack travel mm : 13.60 Tolerance mm : + 0.10	+ Aneroid pressure
Total differential	+ hPa : -
AMPROVA / AL TITUDE	Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	+ Del. quantity + cm3/1000 strokes : 67.0
	Tolerance
SETTING	+ cm3/1000 strokes : +- 1.0 + Check tolerance
	+ cm3/1000s. : +- 3.0
Rated speed rpm : 500	†
Pressure hPa : 1200 rack travel mm : 13.60	BREAKAWAY
Tolerance mm : +- 0.05	
MEASUREMENT	+ Rack travel in mm : 12.60
PIEAGOREPIEM	Rated speed rpm : 1285
Pressure hPa : -	Tolerance 1/min : + 10
Rated speed rpm : 500 Tolerance mm : + 0.10	1
Rated speed rpm : 500	† STARTING FUEL DELIVERY
n In 160	4
Pressure hPa : 600	+ Rated speed rpm : 100
rack travel mm : 2.00	+ Del. quantity
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check speed 1/min : > 80	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check speed 1/min : > 80 Check	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check speed 1/min : > 80 Check	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS Aneroid pressure	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed
rack travel mm : 2.00 Tolerance mm : + 0.10 Pressure hPa : 350 rack travel mm : 0.50 Tolerance mm : + 0.10 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 200 Check speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5

cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.07.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 244 034A

Injection pump

Pumo designation : PES4MW100/720RS1519

: -3

: 0 413 204 018 EP type number

Governor

Governer design. : RQV300...1300MW132

: 0 420 083 296 Governer no.

Cust. part No. : 0240740702

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA

Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.50

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.00 Tolerance mm : +- 1.00

: 1-3-4-2 Firing order

Phasing : 0-90-180-270 : + 0.50

Tolerance Check

: + - 0.75tolerance "NW

BASIC SETTING

Rated speed rpm : 1270

Rack travel in mm: 11.15

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance cm3/1000s. Rated speed rpm	: 7.0 : 300	Rack travel in mm : 10.00 Tolerance mm : +- 2.00
Rack travel in mn Tolerance mm	n: 4.00 ‡	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes	+	Rated speed rpm : 1270 Aneroid pressure
Tolerance cm3/1000 strokes	: + 2.0	hPa : 700 Del. quantity
Check tolerance cm3/1000s.	: ← 4.5	cm3/1000 strokes : 87.0 Tolerance
Spreed Tolerance cm3/1000 strokes	: 2.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Check tolerance cm3/1000s.	: 4.0	Spreed Tolerance
337 100001	†	cm3/1000 strokes : 4.5 Check tolerance
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	cm3/1000s. : 7.0
GUIDE SLEEVE TRAV	/EL	CONTROL LEVER
Rated speed rpm guide sleeve	: 300	control lever position degree : 111.0
travel mm Tolerance mm	: 0.91 : \(\dagger 0.20 \)	tolerance degree : + 4.0
Rated speed rpm	: 1353	RATED SPEED
guide sleeve travel mm	: 7.02	rack travel mm : 10.10 Rated speed rpm : 1345
Tolerance mm	: + 0.15	Tolerance 1/min : +- 10
Rated speed rpm guide sleeve	+	rack travel mm : 4.00 Rated speed rpm : 1445
travel mm Tolerance mm	: 5.21 : + 0.25	Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 790	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1550
travel mm Tolerance mm	: 3.98 : + 0.25	Rated Speed Ppiir . 1990
Rated speed rpm guide sleeve	: 1759	LOW IDLE
travel mm Tolerance mm	: 12.00 : + 0.25	control lever
Rated speed rpm	: 1870	position degree : 74.0 tolerance degree : +- 4.0
guide sleeve travel mm Tolerance mm	: 13.50 : + 0.50	Testing:
		Rated speed rpm : 300 rack travel mm : 4.00
GUIDE SLEEVE POSI	+	Tolerance mm : +- 0.10
Rated speed rpm	: 1500 +	Rated speed rpm : 200

CRT mm min.	: > 4.70	+ Check tolerance + cm3/1000s. : +- 4.0 + Spreed + Tolerance
TORQUE CONTROL		+ cm3/1000 strokes : 6.0 + Check tolerance
Rated speed rpm rack travel mm	: 11.15	+ cm3/1000s. : 9.0
Tolerance mm		+ Aneroid pressure + hPa : -
Rated speed rpm rack travel mm	: 11.15	+ Rated speed rpm : 500 + Del. quantity
Tolerance mm	: +- 0.10	cm3/1000 strokes : 67.0 Tolerance
ANEROID/ALTITUDE		+ cm3/1000 strokes : + 1.0 + Check tolerance + cm3/1000s. : + 3.0
COMPENSATOR TEST		† clib/10003. ; † 5.0
SETTING		BREAKAWAY
Rated speed rpm Pressure hPa	: 700	+ Rack travel in mm: 10.10
rack travel mm Tolerance mm	: 11.15	Rated speed rpm : 1345 Tolerance 1/min : + 10
MEASUREMENT		†
Pressure hPa Rated speed rpm	: - : 500	STARTING FUEL DELIVERY
Tolerance mm	: ← 0.10	Rated speed rpm : 100 Del. quantity
Rated speed rpm	: 500	+ cm3/1000 strokes : 125.0 + Tolerance
Pressure hPa rack travel mm	: 230 : 0.20	+ cm3/1000 strokes : + 5.0 + Check tolerance
Tolerance mm		cm3/1000s. : + 8.0
START CUT-OUT		‡
Rated speed rpm	: > 100	LOW IDLE
Rated speed rpm	: < 200	Rated speed rpm : 300
Check speed 1/min	: > 80	+ rack travel mm : 4.00 + Tolerance mm : + 0.10
Check speed 1/min	: < 220	+ Del. quantity + cm3/1000 strokes : 12.0
		+ Tolerance + cm3/1000 strokes : +- 2.0
FUEL DELIVERY CHA	ARACTERISTICS	Check tolerance : + 4.5
Aneroid pressure	• 700	+ Spreed
hPa Rated speed rpm	: 700 : 750	Tolerance cm3/1000 strokes : 2.0
Del. quantity cm3/1000 strokes	: 79.0	+ Check tolerance + cm3/1000S. : 4.0
Tolerance cm3/1000 strokes	: ← 1.5	† †
		-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.07.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 244 035A

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

EP type number : 0 413 204 017

Governor

Governer design. : RQV300...1300MW132

: -3

: 0 420 083 292 Governer no.

Cust. part No. : 0240740802

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 : +- 1.00 Tolerance mm

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1270

Rack travel in mm: 11.15 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 3.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance	1
cm3/1000s. : 7.0	Rack travel in mm: 10.00
	Tolerance mm : +- 2.00
Rated speed rpm : 300	†
Rack travel in mm: 4.00	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : +- 0.10	TOLL ZOND DELIVERY AT TOLL BOND STOT
Del. quantity	Rated speed rpm : 1270
cm3/1000 strokes : 12.0	Aneroid pressure
Tolerance cm3/1000 strokes : +- 2.0	hPa : 700 Del. quantity
Check tolerance	cm3/1000 strokes : 87.0
cm3/1000s. : +- 4.5	- Tolerance
Spreed	cm3/1000 strokes : + 1.0
Tolerance - cm3/1000 strokes : 2.0	+ Check tolerance + cm3/1000s. : + 3.0
Check tolerance	Spreed
cm3/1000s. : 4.0	+ Tolerance
•	cm3/1000 strokes : 4.5
(B) SETTING OF INJECTION PUMP	Check tolerance : 7.0
WITH GOVERNOR	
	+
GUIDE SLEEVE TRAVEL	CONTROL LEVER
GOIDE STEERS INNAET	CONTROL LEVER
Rated speed rpm : 300 -	control lever
guide sleeve	position degree : 111.0
travel mm : 0.91 - Tolerance mm : + 0.20 -	tolerance degree : +- 4.0
roter arroe min	RATED SPEED
Rated speed rpm : 1353	
guide sleeve	rack travel mm : 10.10
travel mm : 7.02 - 7.02 - 7.05 - 7.05 - 7.05	+ Rated speed rpm : 1310 + Tolerance 1/min : + 10
- Total and man	Tocardiae mini
Rated speed rpm : 1090 -	rack travel mm : 4.00
guide sleeve - travel mm : 5.21 -	Rated speed rpm : 1445 Tolerance 1/min : + 5
Tolerance mm : + 0.25	- rocerance min : - 3
-	rack travel mm : 0.50
Rated speed rpm : 790	Tolerance mm : + 0.50
guide sleeve - travel mm : 3.98 -	Rated speed rpm : 1550
Tolerance mm : + 0.25	
Rated speed rpm : 1759	LOW IDLE
guide sleeve - travel mm : 12.00 -	
Tolerance mm : + 0.25	control lever
4070	position degree : 74.0
Rated speed rpm : 1870 - guide sleeve -	tolerance degree : + 4.0
travel mm : 13.50	- Testing:
Tolerance mm : + 0.50	-
	Rated speed rpm : 300
GUIDE SLEEVE POSITION -	rack travel mm : 4.00 Tolerance mm : +- 0.10
ANTIC OFFICE LANTITAGE	
Rated speed rpm : 1500	Rated speed rpm : 200

CRT mm min. :> 4.70	Check tolerance cm3/1000s. : + 4.0 Spreed
TORQUE CONTROL	Tolerance cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm : 1270 rack travel mm : 11.15	cm3/1000s. : 9.0
Tolerance mm : + 0.05	Aneroid pressure hPa : -
Rated speed rpm : 750 rack travel mm : 11.15 Tolerance mm : + 0.10	Rated speed rpm : 500 Del. quantity
Tolerance mm : +- 0.10	cm3/1000 strokes : 67.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	- cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 3.0
SETTING	BREAKAWAY
Rated speed rpm : 500	<u>†</u>
Pressure hPa : 700	Rack travel in mm: 10.10
rack travel mm : 11.15 Tolerance mm : + 0.05	+ Rated speed rpm : 1310 + Tolerance 1/min : +- 10
MEASUREMENT	Toterance Minim: +- 10
Pressure hPa : Rated speed rpm : 500	+ STARTING FUEL DELIVERY
Tolerance mm : +- 0.10	Rated speed rpm : 100
Dated aread area	Del. quantity
Rated speed rpm : 500	+ cm3/1000 strokes : 125.0 + Tolerance
Pressure hPa : 230	+ cm3/1000 strokes : + 5.0
rack travel mm : 0.20 Tolerance mm : + 0.10	+ Check tolerance + cm3/1000s. : +- 8.0
loterance in : + 0.10	† Clib/10005. : 0.0
START CUT-OUT	†
Rated speed rpm : > 100	LOW IDLE
Rated speed rpm : < 200	t Catad aread area a 700
Check	+ Rated speed rpm : 300 + rack travel mm : 4.00
speed 1/min :> 80	+ Tolerance mm : +- 0.10
Check	+ Del. quantity
speed 1/min : < 220	+ cm3/1000 strokes : 12.0 + Tolerance
	+ cm3/1000 strokes : + 2.0
FUEL DELIVERY CHARACTERISTICS	theck tolerance
Aneroid pressure	+ cm3/1000s. : +- 4.5 + Spreed
hPa : 700	+ Tolerance
Rated speed rpm : 750	+ cm3/1000 strokes : 2.0
Del. quantity cm3/1000 strokes : 79.0	+ Check tolerance + cm3/1000s. : 4.0
Tolerance	+
cm3/1000 strokes : +- 1.5	†
	†

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.06.95 : ISO 4113 Test oil

Combination No. : 0 403 476 142

Injection pump

Pump designation : PES6MW100/720RS1239 : 0 413 406 238 EP type number

Governor

Governer design. : RSV750...1200MW0A372

: 0 420 085 255 Governer no.

Cust. part No. : 0250748902

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor

Power KW : 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.65 : + 0.05Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 12.30 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 67.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +--3.0

Spreed Tolerance

3.5 cm3/1000 strokes :

		+	
Check tolerance cm3/1000s.	: 6.0	control lever position degree tolerance degree	: 119.0 : + 4.0
Rated speed rpm	: 350	+	4.0
	: 7.50 : + 0.25 : 12.0	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : +- 0.70 : 1450
Check tolerance	: + 2.0	rack travel mm Rated speed rpm	: 4.00 : 1400
cm3/1000S. Spreed Tolerance	: +- 4.5	rack travel mm Rated speed rpm	: 11.30 : 1250
	: 3.5	Tolerance 1/min	: + 8
	: 5.5	ASSEMBLY GOVERNOR	SETTING
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	Rated speed rpm Tolerance 1/min rack travel mm	: 1240 : mi 0 : 11.30
GUIDE SLEEVE POSIT	ION	Rated speed rpm Tolerance 1/min rack travel mm	: 1370 : + 4 : 4.00
Rated speed rpm	: 800	+ Rated speed rpm	: 1241
Rack travel in mm Tolerance mm	: 0.65 : ← 0.35	Tolerance 1/min rack travel mm	: mi 0 : 11.30
governor spring pre-tension click setting x	: 4.00	Rated speed rpm Tolerance 1/min rack travel mm	: 1371 : + 4 : 4.00
		Rated speed rpm Tolerance 1/min	: 1242 : mi 0
FULL LOAD DELIVERY		+ rack travel mm	: 11.30
Rated speed rpm Aneroid pressure hPa	: 1200 : -	Rated speed rpm Tolerance 1/min rack travel mm	: 1372 : + 4 : 4.00
Del. quantity cm3/1000 strokes : Tolerance	67.0	Rated speed rpm Tolerance 1/min	: 1243 : mi 0
cm3/1000 strokes :	: +- 1.0	rack travel mm	: 11.30
cm3/1000s. : Spreed Tolerance	: ← 3.0	Rated speed rpm Tolerance 1/min rack travel mm	: 1373 : + 4 : 4.00
cm3/1000 strokes :	3.5	Rated speed rpm	: 1248
cm3/1000s.	6.0	Tolerance 1/min rack travel mm	: mi 0 : 11.30
		Rated speed rpm	: 1378
CONTROL LEVER		Tolerance 1/min rack travel mm	: + 4 : 4.00

Rated speed rpm : 1249 Tolerance 1/min : mi 0 rack travel mm

Rated speed rpm 1379 Tolerance 1/min : +-4,00 rack travel mm

LOW IDLE

Testing:

350 Rated speed rpm 7.50 rack travel mm Tolerance mm : + 0.25

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm 1200 12.30 rack travel mm : + 0.05 Tolerance mm

Rated speed rpm : 600 12.30 rack travel mm Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 600 Rated speed rpm

Del. quantity cm3/1000 strokes : 45.0

Tolerance

cm3/1000 strokes : +-1.5

Check tolerance

cm3/1000s. 4.0 : +-

Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance

7.0 cm3/1000s.

STARTING FUEL DELIVERY

100 Rated speed rpm :

Del. quantity cm3/1000 strokes : 83.0 Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : +--8.0

LOW IDLE

Rated speed rpm 350 7.50 rack travel mm Tolerance mm : + 0.25 Del. quantity cm3/1000 strokes : 12.0 Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s. : +-4.5 Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 21.06.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 476 143

Injection pump

Pump designation : PES6MW100/720RS1239

EP type number : 0 413 406 238

Governor

Governer design. : RSV750...1200MW0A373

: 0 420 085 256 Governer no.

Cust. part No. : 0260746002

Customer-spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 62.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.65 : + 0.05Tolerance mm Check : + 0.10tolerance mm

Rack travel in mm: 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 10.30 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 47.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

		1	
Check tolerance cm3/1000s.	: 6.0	control lever position degree	: 119.0
Rated speed rpm	: 350	RATED SPEED	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.25	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : +- 0.70 : 1450
Tolerance cm3/1000 strokes		rack travel mm Rated speed rpm	: 4.00 : 1370
Check tolerance cm3/1000s. Spreed	: + 4.5	rack travel mm Rated speed rpm	
Tolerance cm3/1000 strokes Check tolerance	: 3.5	Tolerance 1/min ASSEMBLY GOVERNOR	
cm3/1000s.	: 5.5	Rated speed rpm	: 1240
(B) SETTING OF IN.	JECTION PUMP	Tolerance 1/min rack travel mm	
W2111 GOVERNOR		Rated speed rpm Tolerance 1/min rack travel mm	: 1340 : +- 4 : 4.00
GUIDE SLEEVE POSIT	TION	+	
Rated speed rpm		+ Rated speed rpm + Tolerance 1/min + rack travel mm	
Rack travel in mm Tolerance mm	: 0.65 : + 0.35	Rated speed rpm + Tolerance 1/min	
governor spring pre-tension click setting x	: 4.00	rack travel mm Rated speed rpm	: 4.00 : 1242
		Tolerance 1/min rack travel mm	
FULL LUAD DELIVERY	AT FULL LOAD STOP	Rated speed rpm	: 1342
Rated speed rpm Aneroid pressure hPa	: 1200	Tolerance 1/min rack travel mm	: +- 4 : 4.00
Del. quantity cm3/1000 strokes Tolerance	· : 47.0	Rated speed rpm Tolerance 1/min rack travel mm	: 1243 : mi 0 : 9.30
cm3/1000 strokes Check tolerance	: + 1.0	Rated speed rpm	: 1343
cm3/1000s. Spreed Tolerance	: +- 3.0	Tolerance 1/min rack travel mm	: +- 4
cm3/1000 strokes Check tolerance	: 3.5	Rated speed rpm Tolerance 1/min	: 1248 : mi 0
cm3/1000s.	: 6.0	t rack travel mm	: 9.30 : 1348
CONTROL LEVER		+ Rated speed rpm + Tolerance 1/min + rack travel mm	: +- 4 : 4.00
		Rated speed rpm	: 1249

Tolerance 1/min : mi 0 rack travel mm : 9.30

Rated speed rpm : 1349

Tolerance 1/min : +- 4 rack travel mm : 4.00

LOW IDLE

Testing:

Rated speed rpm : 350 rack travel mm : 7.50 Tolerance mm : + 0.25

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1200 rack travel mm : 10.30 Tolerance mm : + 0.05

Rated speed rpm : 600 rack travel mm : 10.30 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 28.0

Tolerance

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 7.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : \leftarrow 5.0

Check tolerance

cm3/1000s. : + 8.0

LOW IDLE

Rated speed rpm : 350 rack travel mm : 7.50 Tolerance mm : + 0.25

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.05.90 Test oil : ISO 4113

Combination No. : 0 400 836 016

Injection pump

Pump designation : PES6A85D410/3RS2415

EP type number : 0 410 886 915

Governor

Governer design. : RQV750AB1004L : 0 420 212 093 Governer no.

Cust. part No.

Customer-spec. information : KHD Customer

Motor : BF6L913 Power KW : 42.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : **←** 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. 4.5

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 752

guide sleeve

3.33 travel mm : +- 0.25 Tolerance mm

Rated speed rpm guide sleeve

530

-6.91 travel mm :

Tolerance mm : + 0.25	Pated speed page 1730
Rated speed rpm : 880 guide sleeve	Rated speed rpm : 739 rack travel mm : 11.00
guide steeve travel mm : 17.51 Tolerance mm : + 0.25	Rated speed rpm : 780
Tolerance mm : + 0.25	+ Tolerance 1/min : + 5
	rack travel mm : 4.00
Rated speed rpm : 825	+
guide sleeve	† rack travel mm : 0.50
travel mm : 10.00	† Tolerance mm : +- 0.50
Tolerance mm : $+$ 0.25	+
m . 1	Rated speed rpm : 740 rack travel mm : 11.00
Rated speed rpm : 880	f rack travel mm : 11.00
guide steeve	T Batadana dayan 300
travel mm : 11.50	Rated speed rpm : 781
Tolerance mm : + 0.50	+ Tolerance 1/min : + 5
	† rack travel mm : 4.00
GUIDE SLEEVE POSITION	† rack travel mm : 0.50
GOIDE SEEENE LOSTITUA	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm : 800	T Total disce that . += 0.50
Nated speed (pill : Ooo	Rated speed rpm : 741
	+ rack travel mm : 11.00
FULL LOAD DELIVERY AT FULL LOAD STOP	1
	Rated speed rpm : 792
Rated speed rpm : 720	+ Tolerance 1/min : + 5
Aneroid pressure	rack travel mm : 4.00
hPa : -	+
	rack travel mm : 0.50
	+ Tolerance mm : $+$ 0.50
	†
CONTROL LEVER	Rated speed rpm : 742 rack travel mm : 11.00
and all lavan	rack travel mm : 11.00
control lever	Poted aread man a 707
position degree : 87.0	Rated speed rpm : 793 Tolerance 1/min : + 5
tolerance degree : + 4.0	rack travel mm : 4.00
	T rack cravet fixer . 4.00
ASSEMBLY GOVERNOR SETTING	rack travel mm : 0.50
HOURIDE! GOTERIOR SETTENG	Tolerance mm : +- 0.50
Rated speed rpm : 737	1
rack travel mm : 11.00	+
	+
Rated speed rpm : 778	+
Tolerance 1/min : + 5	+
rack travel mm : 4.00	+ START CUT-OUT
	† - · · · · · · · · · · · · · · · · · ·
rack travel mm : 0.50	+ Rated speed rpm : > 100
Tolerance mm : ← 0.50 Rated speed rpm : 798	+ Rated speed rpm : < 660
Rated speed rpm : 798	Check
Rated speed rpm : 738	+ speed 1/min :> 80
rack travel mm : 11.00	I speed trimit . > 30
I GON GI GYEC HAN . IT-OU	
Rated speed rpm : 779	FUEL DELIVERY CHARACTERISTICS
Tolerance 1/min : + 5	
rack travel mm : 4.00	Aneroid pressure
	+ hPa : -
rack travel mm : 0.50	Rated speed rpm : 750
Tolerance mm : +- 0.50	+

vet. quantity		
cm3/1000 strokes	:	36.0
Tolerance		
cm3/1000 strokes	: +-	1.0
Check tolerance		
cm3/1000S.	: +	3.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.0
Check tolerance		
cm3/1000s.	:	5.0
· · · · · · · · · · · · · · · · · · ·	-	

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	20.25
Tolerance mm	: +-	0.75
Del. quantity		
cm3/1000 strokes	:	130.0
Tolerance		
cm3/1000 strokes	: +	5.0
Check tolerance		
cm3/1000s.	. +-	8.0

LOW IDLE

Del. quantity cm3/1000 strokes Tolerance	:	12.0
cm3/1000 strokes	: +-	3.0
Check tolerance		- 0
cm3/1000s. Spreed	: +	5.0
Tolerance		
cm3/1000 strokes	:	2.5
Check tolerance cm3/1000S.	:	4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.06.95 Test oil : ISO 4113

Combination No. : 0 400 844 094

Injection pump

Pump designation : PES4A90D410RS2666 EP type number : 0 410 894 029

Governor

Governer design. : RQV300...1400AB1065

: -12L

Governer no. : 0 420 212 207

Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM364
Power KW : 61.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.55
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 5.0

Rated speed rpm : 300

Rack travel in mm: 8.70

Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 10.0

Tolerance cm3/1000 strokes	: +- 2.0	- control lever	
Check tolerance cm3/1000s.	: +- 4.0	position degree tolerance degree	
Spreed Tolerance		RATED SPEED	
cm3/1000 strokes Check tolerance	: 2.0	rack travel mm	: 9.50
cm3/1000s.	: 4.0	Rated speed rpm Tolerance 1/min	: 1445
(B) SETTING OF IN WITH GOVERNOR	WECTION PUMP	rack travel mm Rated speed rpm Tolerance 1/min	: 1550
GUIDE SLEEVE TRAV	/EL	rack travel mm	
Rated speed rpm	: 300	- Tolerance mm - Rated speed rpm	
guide sleeve travel mm Tolerance mm	: 1.05 : + 0.25		
	-	- LOW IDLE	
Rated speed rpm guide sleeve travel mm	: 1500 - : 8.55 -		
Tolerance mm	: +- 0.05	- control lever - position degree	
Rated speed rpm	: 500	tolerance degree	: +- 4.0
guide sleeve travel mm	: 2.55	Testing:	700
Tolerance mm	: ← 0.25	 Rated speed rpm rack travel mm 	: 8.70
Rated speed rpm guide sleeve	-	Tolerance mm	
travel mm Tolerance mm	: 4.20 - : +- 0.10 -	- Rated speed rpm	
		- CRT mm min.	
	Y AT FULL LOAD STOP	- Rated speed rpm	: 610
Rated speed rpm Aneroid pressure hPa	: 1400	TORQUE CONTROL	
Del. quantity cm3/1000 strokes	: 59.5	- - Dimension a mm - Rated speed rpm	: 1.00 : 1400
Tolerance cm3/1000 strokes	: ← 0.5	- rack travel mm - Tolerance mm	: 10.55 : + 0.05
Check tolerance	+	-	
cm3/1000s. Spreed	: +- 2.5	- Rated speed rpm - rack travel mm	: 475 : 11.55
Tolerance cm3/1000 strokes	: 3.0	Tolerance mm	: +- 0.05
Check tolerance cm3/1000s.	: 5.0	- Rated speed rpm - rack travel mm	: 850 : 11.00
	‡	- Tolerance mm -	: + 0.10
CONTROL LEVER		OTANT CUT OUT	
	†	- START CUT-OUT -	

Rated speed rpm	: > 100
Rated speed rpm	: < 220
Check	
speed 1/min Check	; > 80
speed 1/min	: < 240
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: - : 475
Del. quantity	- ,,,,
cm3/1000 strokes Tolerance	: 46.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 3.5
Aneroid pressure	• ~
Rated speed rpm	850
Del. quantity cm3/1000 strokes	: 49.0
Tolerance	
cm3/1000 strokes Check tolerance	: + 1.5
cm3/1000s.	: + 4.0
BREAKAWAY	
Rack travel in mm	9.50
Rated speed rpm	: 1445
Tolerance 1/min	: +- 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 17.20
Tolerance mm Del. quantity	: +- 0.20
cm3/1000 strokes	: 83.0
Tolerance cm3/1000 strokes	: +- 5.0
Check tolerance	
cm3/1000s.	: +- 8.0
LOW IDLE	
Rated speed rpm	: 300_
rack travel mm	: 8.70

Tolerance mm	: +-	0.10
Del. quantity cm3/1000 strokes	:	10.0
Tolerance cm3/1000 strokes	: +	2.0
Check tolerance cm3/1000s.	• +-	4.0
Spreed	•	4.0
Tolerance cm3/1000 strokes	:	2.0
Check tolerance cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.06.95 Test oil : ISO 4113

Combination No. : 0 400 844 098

Injection pump

Pump designation : PES4A95D41ORS2809 EP type number : 0 410 894 993

Governor

Governer design. : RQV300...1400AB1065

: -28L

Governer no. : 0 420 212 242

Cust. part No. :

Customer—spec. information Customer : MB—NFZ Motor : OM 364 Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.95
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 65.5

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance

cm3/1000s. : +- 2.5

3.5

Spreed

Tolerance

cm3/1000 strokes :

Check tolerance

cm3/1000s. : 6.0

Rated speed rpm : 300

Rack travel in mm: 8.70 Tolerance mm: + 0.10

Del. quantity

cm3/1000 strokes : 10.0

Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed	Check tolerance cm3/1000s. : 6.0
Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	control LEVER control lever position degree : 115.0 tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED rack travel mm : 8.90
GUIDE SLEEVE TRAVEL	+ Rated speed rpm : 1455 + Tolerance 1/min : + 5
Rated speed rpm : 300 guide sleeve travel mm : 1.05 Tolerance mm : + 0.25 Rated speed rpm : 1500 guide sleeve travel mm : 8.55 Tolerance mm : + 0.05	rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1670
Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25	LOW IDLE control lever position degree : 77.0
Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10	tolerance degree : + 4.0 Testing: Rated speed rpm : 300
GUIDE SLEEVE POSITION	rack travel mm : 8.70 Tolerance mm : + 0.10
Rated speed rpm : 1450	Rated speed rpm : 100
Rack travel in mm : 16.50 Tolerance mm : + 1.30	CRT mm min. : > 9.60 Rated speed rpm : 625
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 65.5 Tolerance	Rated speed rpm : 1400 rack travel mm : 9.95 Tolerance mm : + 0.05 Rated speed rpm : 400
cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.5 Spreed Tolerance cm3/1000 strokes : 3.5	rack travel mm : 11.15 Tolerance mm : + 0.05 Rated speed rpm : 670 rack travel mm : 10.80 Tolerance mm : + 0.10

Rated speed rpm rack travel mm Tolerance mm	
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 220
Check speed 1/min Check	: > 80
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	• _
Rated speed rpm	: 400
Del. quantity cm3/1000 strokes	: 49.5
Tolerance cm3/1000 strokes	: ← 1.5
Check tolerance cm3/1000S.	: +- 4.0
REAKAWAY Rack travel in mm Rated speed rpm Tolerance 1/min	: 1455
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Folerance mm Del. quantity	: 100 : 15.00 : + 0.20
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance	: +- 5.0
m3/1000s.	: +- 8.0
.OW IDLE	
Rated speed rpm	: 300

Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.09.86 Test oil : ISO 4113

Combination No. : 0 400 846 336

Injection pump

Pump designation : PES6A90D410RS2293W EP type number : 0 410 896 049

Governor

Governer design. : RQV300...1425AB740L

Governer no. : 0 420 212 037

Cust. part No.

Customer—spec. information Customer : MB-NFZ Motor : 0M352 Power KW : 115.0

TEST BENCH REQUIREMENTS

Inlet line : 2.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.20
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm: 10.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s. : \leftarrow 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s.

: 4.5

	+	Del. quantity
Del. quantity cm3/1000 strokes	: 12.0	cm3/1000 strokes : 72.0 Tolerance
Tolerance cm3/1000 strokes	: + 3.0	cm3/1000 strokes : +- 0.5 Check tolerance
Check tolerance	+	cm3/1000s. : +- 2.5
cm3/1000S. Spreed	: + 5.0	Spreed Tolerance
Tolerance cm3/1000 strokes	: 2.0	cm3/1000 strokes : 3.0
Check tolerance	+	Check tolerance cm3/1000s. : 4.5
cm3/1000s.	: 4.0	
(B) SETTING OF IN	HECTTON DIME	CONTROL LEVER
WITH GOVERNOR	NECTEON FORM	
	‡	control lever position degree : 114.0
GUIDE SLEEVE TRAV	'EL +	tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 1460	RATED SPEED
travel mm	: 8.50	rack travel mm : 9.90
Tolerance mm	: + 0.10	Rated speed rpm : 1460 Tolerance 1/min : +- 5
Rated speed rpm	: 550	
guide sleeve travel mm	: 2.85	rack travel mm : 4.00 Rated speed rpm : 1575
Tolerance mm	: + 0.15	Tolerance 1/min : + 15
Rated speed rpm	: 950	rack travel mm : 0.50
guide sleeve travel mm	: 5.35	Tolerance mm : + 0.50 Rated speed rpm : 1700
Tolerance mm	: 5.35 : + 0.15	rated speed (pii . 1700
Rated speed rpm	: 775	•======================================
guide sleeve	1	LOW IDLE
travel mm Tolerance mm	: 4.35 : + 0.25	
	+	control lever
Rated speed rpm guide sleeve	: 300	position degree : 68.0 tolerance degree : +- 4.0
travel mm	: 1.45	•
Tolerance mm	: + 0.75	Testing:
GUIDE SLEEVE POSI	TTON	Rated speed rpm : 300
-	+	rack travel mm : 7.60 Tolerance mm : + 0.10
Rated speed rpm	: 1420	Rated speed rpm : 100
Rack travel in mm Tolerance mm		CRT mm min. :> 9.10
roterance nan	1.30	
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	Rated speed rpm : 445
Rated speed rpm Aneroid pressure		TORQUE CONTROL
hPa	: - +	Rated speed rpm : 1400
	+	Tolerance mm : +- 0.05

START CUT-OUT

Rated speed rpm : > 100 Rated speed rpm : < 220

Check

speed 1/min :> 80 Check speed 1/min : < 240

BREAKAWAY

Rack travel in mm: 9.90
Rated speed rpm: 1460
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 76.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW IDLE

Del. quantity cm3/1000 strokes : 12.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. 4.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.10.92 Test oil : ISO 4113

Combination No. : 0 400 846 549

Injection pump

Pump designation : PES6A95D41ORS2471 EP type number : 0 410 896 952

Governor

Governer design. : RQV300...1250AB1089

: -2L

Governer no. : 0 420 212 190

Cust. part No. :

Customer—spec. information Customer : KHD Motor : BF6L913C

Motor : BF6L9130 Power KW : 141.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

 $\begin{array}{ccc} & : -300 \\ & : + & 0.50 \end{array}$

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.65
Tolerance mm : + 0.05

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 102.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 6.0

Rated speed rpm : 300

Rack travel in mm : 7.30

Tolerance mm : \div 0.10

Del. quantity	Tolerance
cm3/1000 strokes : 13.0	cm3/1000 strokes : 3.5
Tolerance	Check tolerance
cm3/1000 strokes : +- 3.0 +	cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : + 5.5	
Spreed	
Tolerance	CONTROL LEVER
cm3/1000 strokes : 3.5	
Check tolerance	control lever
cm3/1000s. : 5.5	position degree : 122.0
1	tolerance degree : +- 4.0
1	
(B) SETTING OF INJECTION PUMP	RATED SPEED
WITH GOVERNOR	
#IIII GOVERNOR	rack travel mm : 10.60
	Rated speed rpm : 1295
GUIDE SLEEVE TRAVEL	Tolerance 1/min : +- 5
doine seelve travel	rocerance (/mill : += 3
Rated speed rpm : 300	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1360
	Tolerance 1/min : +- 15
Tolerance mm : + 0.05	0.50
1000	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm : 1290	
guide sleeve	Rated speed rpm : 1500
travel mm : 8.45	
Tolerance mm : + 0.05	
+	
Rated speed rpm : 650 +	LOW IDLE
guide steeve +	
travel mm : 3.80	
Tolerance mm : + 0.10 +	control lever
+	position degree : 73.0
Rated speed rpm : 1200 +	tolerance degree : + 4.0
guide sleeve	
travel mm : 7.00	Testing:
Tolerance mm : + 0.10	
	Rated speed rpm : 300
	rack travel mm : 7.30
GUIDE SLEEVE POSITION	rack travel mm : 7.30 Tolerance mm : + 0.10
Total office (polition	rocer drice min
Rated speed rpm : 1290	Rated speed rpm : 100
Tarea opeca (pii) • 1270	nated opecu (piii + 100
Rack travel in mm: 16.50	CRT mm min. :> 9.00
Tolerance mm : + 1.30	Oct 1989 1931; 7.00
Total ance in . T 1.50	Rated speed rpm : 418
	nated Speed Thin : 410
FULL LOAD DELIVERY AT FULL LOAD STOP	
TOLL LOAD DECEVERY AT FULL LOAD STOP	TORQUE CONTROL
Poted speed now 1250	LOVARDE COMMUNICA
Rated speed rpm : 1250	Poted speed pro 1250
Aneroid pressure	Rated speed rpm : 1250
hPa : - + Del. quantity +	rack travel mm : 11.65 Tolerance mm : + 0.05
vel. quantity	loterance mm : +- U.U5
cm3/1000 strokes : 102.0	
Tolerance	Rated speed rpm : 500
cm3/1000 strokes : + 1.0 +	
	rack travel mm : 11.70
Check tolerance	rack travel mm : 11.70 Tolerance mm : + 0.10
Check tolerance	rack travel mm : 11.70 Tolerance mm : + 0.10 Rated speed rpm : 850

rack travel mm Tolerance mm	: 11.65 : + 0.10
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 220
Check speed 1/min	; > 80
Check speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	: -
Rated speed rpm Del. quantity cm3/1000 strokes	: 850 : 97.0
Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: + 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 16.00 : + 0.20
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	: +- 5.0
Check tolerance cm3/1000s.	: + 8.0
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 300 : 7.30 : + 0.10
cm3/1000 strokes	: 13.0

Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 5.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 07.06.95 Edition Test oil : ISO 4113 Combination No. : 0 400 874 218 Injection pump Pump designation : PES4A90D410RS2294 EP type number : 0 410 894 011 Governor Governer design. : RSV350...1400A0c2006 : 0 420 232 395 Governer no. Cust. part No. : Customer-spec. information : MB-NFZ Customer Motor : OM 314 Power KW : 62.5 TEST BENCH REQUIREMENTS Inlet line : 1.2 Test oil inlet temp. °C Tolerance °C : + 2.0 : 1 419 992 198 Overflow valve Inlet press. bar : 1.5 Test nozzle holde : 0 681 343 009 assembly Opening pressure 173.5 bar : **←** 1.5 Tolerance bar : 1 680 750 014 Test lines

x inside diameter: 2.0 x length mm : 600
REMARKS
(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values
BEGINNING OF DELIVERY
Test pressure bar : 26.0 Tolerance bar : + 1.0
Firing order : 1-3-4-2
Phasing : 0-90-180-270 Tolerance : + 0.50 Check tolerance *NW : + 0.75
BASIC SETTING
Rated speed rpm : 1380
Rack travel in mm : 10.45 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 64.0
Tolerance cm3/1000 strokes : + 0.5
Check tolerance cm3/1000s. : +- 2.5
Spreed Tolerance cm3/1000 strokes : 3.0
Check tolerance cm3/1000s. : 4.5
Rated speed rpm : 350
Rack travel in mm: 9.30 Tolerance mm: + 0.10 Del. quantity
cm3/1000 strokes : 27.0

Outside diameter :

6.0

Tolerance +	Tolerance mm : + 0.70
cm3/1000 strokes : + 3.0 +	Rated speed rpm : 1600
Check tolerance	matea opeca i piii i i iooo
cm3/1000s. : + 5.0	
Spreed	
Tolerance	LOW IDLE
cm3/1000 strokes : 2.0 +	
Check tolerance +	
cm3/1000s. : 4.0	control lever
1	position degree : 83.0
1	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP	to condition degree
WITH GOVERNOR	Testing:
WITH GOVERNOR	resting:
Ť	700
†	Rated speed rpm : 350
+	rack travel mm : 9.30
GUIDE SLEEVE POSITION +	Tolerance mm : +- 0.10
1	
Rated speed rpm : 800	rack travel mm : 2.00
	Rated speed rpm : 560
Park through in the August 1975	Tolerance 1/min : + 30
Rack travel in mm: 0.65	Tolerance 1/min : + 30
Tolerance mm : + 0.35 +	
†	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. :> 19.00
+	
Rated speed rpm : 1380	Rated speed rpm : 650
Aneroid pressure	macea opeca i pili
	CRT mm max. : < 1.00
hPa : - +	CRT mm max. : < 1.00
Del. quantity	
cm3/1000 strokes : 64.0	
Tolerance +	TORQUE CONTROL
cm3/1000 strokes : + 0.5	
Check tolerance	Rated speed rpm : 1380
cm3/1000s. : + 2.5	rack travel mm : 10.45
1	
Spreed	Tolerance mm : + 0.05
Tolerance	
cm3/1000 strokes : 3.0 +	Rated speed rpm : 600
Check tolerance	rack travel mm : 10.55
cm3/1000s. : 4.5	Tolerance mm : + 0.10
1	
CONTROL LEVED	
CONTROL LEVER	
†	
control lever +	
position degree : 115.0 +	BREAKAWAY
tolerance degree : + 4.0	
RATED SPEED	Rack travel in mm : 9.40
Three of LLD	
T	
rack travel mm : 9.40	Tolerance 1/min : + 5
Rated speed rpm : 1425	
Tolerance 1/min : + 5 +	
- +	
rack travel mm : 4.40	STARTING FUEL DELIVERY
Rated speed rpm : 1498	with the the state of the test
Tolerance 1/min : + 8	Rated speed rpm : 100
TOTE TAILE TAILED TO	
†	rack travel mm : 15.00
rack travel mm : 1.00 +	Tolerance mm : + 0.30

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: : +-	350 9.30 0.10
Del. quantity cm3/1000 strokes	:	27.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	• +-	5.0
Spreed	• •	7.0
Tolerance cm3/1000 strokes Check tolerance	:	2.0
cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.07.95 : ISO 4113 Test oil

Combination No. : 0 400 874 256

Injection pump

Pump designation : PES4A95D41DRS2877 EP type number : 0 410 894 988

Governor

Governer design. : RSV350...1400A0C819L

Governer no. : 0 420 232 617

Cust. part No.

Customer-spec. information : MB-NFZ Customer Motor : 0M364 Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

173.5 : +- 1.5 Tolerance bar

: 1 680 750 015 Test lines

Outside diameter : 6.0 x inside diameter: 1.5 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.25 : + - 0.05Tolerance mm Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm: \leftarrow 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.55 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +-3.0 cm3/1000S.

Spreed Tolerance

cm3/1000 strokes :

3.5

Check tolerance cm3/1000s.	: 8.0	İ	Rated speed rpm rack travel mm	: 1433 : 9.55
Rated speed rpm Rack travel in mm		<u> </u>	Rated speed rpm Tolerance 1/min rack travel mm	: 1488 : + 6 : 4.00
Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.20	+	rack travel mm Tolerance mm	: 1.00 : +- 0.70
Tolerance cm3/1000 strokes	: + 2.0	Ŧ	Rated speed rpm	: 1620
Check tolerance cm3/1000s. Spreed	: + 4.5	‡	Rated speed rpm rack travel mm	
Tolerance cm3/1000 strokes Check tolerance	: 5.5	†	Rated speed rpm Tolerance 1/min rack travel mm	: 1489 : +- 6 : 4.00
cm3/1000s.	: 9.0	†	rack travel mm Tolerance mm	: 1.00 : + 0.70
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	+	Rated speed rpm	: 1620
		Ī	Rated speed rpm rack travel mm	: 1435 : 9.55
GUIDE SLEEVE POSIT governor spring pre-tension	TION	+	Rated speed rpm Tolerance 1/min rack travel mm	: 1490 : + 6 : 4.00
click setting x	: 4.00	+	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : + 0.70 : 1620
FULL LOAD DELIVERY	AT FULL LOAD STOP	1	Rated speed rpm	: 1436
Rated speed rpm Aneroid pressure	: 1380	‡	rack travel mm	: 9.55
hPa Del. quantity	nas	‡	Rated speed rpm Tolerance 1/min	: 1491 : + 6
cm3/1000 strokes Tolerance	: 72.0	‡	rack travel mm	: 4.00
cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 3.0	+	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : + 0.70 : 1620
Spreed Tolerance cm3/1000 strokes	: 3.5	†	Rated speed rpm	: 1437 : 9.55
Check tolerance cm3/1000s.	: 8.0	+	Rated speed rpm	: 1492
		‡	Tolerance 1/min rack travel mm	: 4.00
CONTROL LEVER		+	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : + 0.70 : 1620
position degree tolerance degree		‡	Rated speed rpm rack travel mm	: 1438 : 9.55
ASSEMBLY GOVERNOR	SETTING	Ŧ	Rated speed rpm Tolerance 1/min	: 1493 : + 6

rack travel mm 4.00 rack travel mm 1.00 Tolerance mm : + 0.70Rated speed rpm 1620 LOW IDLE control lever 80.0 position degree tolerance degree : +-4.0 Testing: Rated speed rpm 350 8.30 rack travel mm Tolerance mm : + 0.202.00 rack travel mm 500 Rated speed rpm 100 Rated speed rpm ; > 19.50 CRT mm min. SET IDLE AUXILIARY SPRING Rated speed rpm 100 rack travel mm 2.00 TORQUE CONTROL 1400 Rated speed rpm rack travel mm 10.55 Tolerance mm : + - 0.05

FUEL DELIVERY CHARACTERISTICS

500

: + 0.10

10.60

Aneroid pressure

Rated speed rpm

rack travel mm

Tolerance mm

hPa : -Rated speed rpm : 400

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 16.20
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 83.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW IDLE

350 Rated speed rpm 8.30 rack travel mm 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s.4.5 : +-Spreed Tolerance 5.5 cm3/1000 strokes : Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 31.05.95 Edition : ISO 4113 Test oil

Combination No. : 0 401 846 471

Injection pump

Pump designation : PE6P100A720RS447 EP type number : 0 411 806 191

Governor

Governer design. : RQ225/1200PA617 Governer no. : 0 421 801 157

Cust. part No. : 0661514

Customer-spec. information Customer : DAF : DHT 825 Motor Power KW : 162.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +-0.1

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : + 1.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25 : + 0.05 Tolerance mm Check tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

: 1-5-3-6-2firing order : 4

Phasing : 0-60-120-180-240

: -300

Tolerance : ← 0.30

Check

tolerance °NW : + 0.50

BASIC SETTING

1000 Rated speed rpm :

Rack travel in mm: 11.45 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 119.5

Tolerance

cm3/1000 strokes : + /1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

Check tolerance		<u>†</u>	Rated speed rpm	: 650
cm3/1000s.	: 6.0	Ŧ	Rack travel in mm Tolerance mm	
Rated speed rpm	: 225	+	roter ance ann	5.0
Rack travel in mo		‡	FULL LOAD DELIVER	Y AT FULL I
Tolerance mm Del. quantity	: + 0.20	<u>†</u>	Rated speed rpm	: 1000
cm3/1000 strokes	: 12.0	+	Aneroid pressure	
Tolerance cm3/1000 strokes	: + 2.0	Ŧ	hPa Del. quantity	: 700
Check tolerance cm3/1000s.	: + 4.5	‡	cm3/1000 strokes Tolerance	: 119.
Spreed		+	cm3/1000 strokes	: +- 1.0
Tolerance cm3/1000 strokes	: 3.5	1	Check tolerance cm3/1000s.	: + 3.0
Check tolerance	: 5.5	+	Spreed	
cm3/1000s.	: 5.5	Ţ	Tolerance cm3/1000 strokes	: 3.5
(B) SETTING OF IN	LIECTION DIME	+	Check tolerance cm3/1000s.	: 6.0
WITH GOVERNOR	ADECITOR LOWL	Ŧ	CIRCA FOODS.	. 0.0
		<u> </u>		
GUIDE SLEEVE TRAV	/EL	1	CONTROL LEVER	
Rated speed rpm	: 225	Ŧ	control lever	440.0
guide sleeve travel mm	: 1.06	1	position degree tolerance degree	
Tolerance mm		+		
Rated speed rpm	: 1247	‡	RATED SPEED	
guide sleeve		+	rack travel mm	
travel mm Tolerance mm	: 6.48 : + 0.10	Ī	Rated speed rpm Tolerance 1/min	
Rated speed rpm		+	rack travel mm	: 4.00
guide sleeve		Į	Rated speed rpm	: 1315
travel mm Tolerance mm	: 6.00 : + 0.10	İ	Tolerance 1/min	: +- 15
		+	rack travel mm	: 0.50
Rated speed rpm guide sleeve	: 390	†	Tolerance mm Rated speed rpm	: +- 0.50 : 1450
travel mm	: 3.78	+		
Tolerance mm	: + 0.10	İ		
Rated speed rpm	: 520	+	LOW IDLE	
guide sleeve travel mm	: 6.00	İ		
Tolerance mm	: + 0.10	1	control lever	
Rated speed rpm	: 1400	Ì	position degree tolerance degree	
guide sleeve		7		4.0
travel mm	: 11.50	†	Testing:	
Tolerance mm	: +- 0.50	Ţ	Rated speed rpm	
CUTAE OF CELL DOOT	TTON	+	rack travel mm	: 5.40
GUIDE SLEEVE POSI	ITON	†	Tolerance mm	: ← 0.10

Rack travel in mm Tolerance mm	: 16.00 : +- 0.60
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1000
hPa	: 700
Del. quantity cm3/1000 strokes	: 119.5
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s. Spreed	: +- 3.0
Tolerance	. 75
cm3/1000 strokes Check tolerance	: 3.5
cm3/1000s.	: 6.0
CONTROL LEVER	
control lever position degree	: 101.0
tolerance degree	: +- 4.0
RATED SPEED	
rack travel mm	: 10.45 : 1243
Rated speed rpm Tolerance 1/min	: + 8
rack travel mm Rated speed rpm	: 4.00 : 1315
Tolerance 1/min	: 1315 : +- 15
rack travel mm	: 0.50
Tolerance mm Rated speed rpm	: ← 0.50 : 1450
LOW IDLE	
control lever position degree tolerance degree	: 74.0 : + 4.0
Testing:	
Rated speed rpm: rack travel mm Folerance mm	: 225 : 5.40 : ← 0.10

2.00 rack travel mm Rated speed rom 385 Tolerance 1/min 20 Rated speed rom 125 CRT mm min. : > 6.00 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.45 Tolerance mm : +- 0.05 Rated speed rpm : 1200 11.45 rack travel mm : + 0.10Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 600 Rated speed rpm : Pressure hPa 700 rack travel mm 11.45 Tolerance mm : +- 0.05 **MEASUREMENT** Pressure hPa Rated speed rpm : 600 10.45 rack travel mm Tolerance mm : + 0.10Rated speed rpm 600 : 315 Pressure hPa 11.15 rack travel mm : **←** 0.05 Tolerance mm 280 Pressure hPa 10.70 rack travel mm : +- 0.10 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 600

BREAKAWAY Rack travel in mm: 10.45 Rated speed rpm : 1243 Tolerance 1/min : + 8 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.25 : + 0.75Tolerance mm Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 15.0Check tolerance cm3/1000s. : +- 19.0 LOW IDLE 225 Rated speed rpm : rack travel mm 5.40 : + 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s.• 5.5 End of test specification sheet

: +- 3.0

Check tolerance

cm3/1000s.

Del. quantity

Tolerance

cm3/1000 strokes :

cm3/1000 strokes : \leftarrow 1.0

94.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.08.95 Test oil : ISO 4113

Combination No. : 0 401 846 962

Injection pump

Pump designation : PE6P12OA32ORS3189 EP type number : 0 411 826 759

Governor

Governer design. : RQ750PA783-3 Governer no. : 0 421 801 631

Cust. part No. : 864847 PO3 v. 02/95

Customer—spec. information Customer : PENTA

Motor : TWD 1010 G

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.65
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.80Tolerance mm : $\leftarrow 0.05$

Del. quantity

cm3/1000 strokes : 260.0

Talanama		1
Tolerance		†
cm3/1000 strokes	; +- 1.0	FILL LOAD AFLICTON AT FULL LOAD CTOD
011 - 4 - 4		+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		† D. J. J. 700
cm3/1000s.	: +- 4.0	+ Rated speed rpm : 700
		_ + Aneroid pressure
Spreed		+ hPa : -
Tolerance	** **	+ Del. quantity
cm3/1000 strokes	: 5.0	- cm3/1000 strokes : 260.0
		_ + Tolerance
Check tolerance		+ cm3/1000 strokes : + 1.0
cm3/1000s.	: 9.0	+ Check tolerance
	W 0.00	+ cm3/1000s. : + 4.0
Rated speed rpm	: 300	+ Spreed
		+ Tolerance
Rack travel in m		+ cm3/1000 strokes : 5.0
Tolerance mm	: + 0.30	+ Check tolerance
Del. quantity		+ cm3/1000s. : 9.0
cm3/1000 strokes	: 25.0	†
Tolerance		†
cm3/1000 strokes	: +- 2.5	
Check tolerance		+ CONTROL LEVER
cm3/1000s.	: ← 5.0	+
Spreed		+ control lever
Tolerance		+ position degree : 85.0
cm3/1000 strokes	: 5.0	+ tolerance degree : +- 4.0
Check tolerance		+
cm3/1000s.	: 8.0	+ RATED SPEED
		+
		+ rack travel mm : 10.80
(B) SETTING OF IN	NJECTION PUMP	Rated speed rpm : 752
(B) SETTING OF IN WITH GOVERNOR	WECTION PUMP	Rated speed rpm : 752 Tolerance 1/min : + 3
	NJECTION PUMP	
	NJECTION PUMP	Tolerance 1/min : + 3 rack travel mm : 4.00
	·	+ Tolerance 1/min : + 3
WITH GOVERNOR	·	Tolerance 1/min : + 3 rack travel mm : 4.00
WITH GOVERNOR	·	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790
GUIDE SLEEVE TRAV	/EL	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790
GUIDE SLEEVE TRAV	/EL	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	/EL : 757 : 3.32	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAV	/EL : 757	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 757 : 3.32	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	/EL : 757 : 3.32 : + 0.25	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	/EL : 757 : 3.32 : + 0.25 : 540	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING
Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	/EL : 757 : 3.32 : ← 0.25 : 540 : ←6.04	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	/EL : 757 : 3.32 : + 0.25 : 540	Tolerance 1/min : + 3 rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750
Rated speed rpm guide sleeve travel mm Tolerance mm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 757 : 3.32 : ← 0.25 : 540 : ← 0.25	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80
Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	/EL : 757 : 3.32 : ← 0.25 : 540 : ← 0.25	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	/EL : 757 : 3.32 : ← 0.25 : 540 : ← 0.25 : ← 0.25 : 890	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788 Tolerance 1/min : + 4
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 757 : 3.32 : ← 0.25 : 540 : ← 0.25 : ← 0.25 : 890 : 16.40	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788
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Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	/EL : 757 : 3.32 : + 0.25 : 540 : -6.04 : + 0.25 : 890 : 16.40 : + 0.25	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 757 : 3.32 : ← 0.25 : 540 : ← 0.25 : ← 0.25 : 890 : 16.40	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50
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GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm	/EL : 757 : 3.32 : + 0.25 : 540 : -6.04 : + 0.25 : 890 : 16.40 : + 0.25 : 837 : 10.00 : + 0.25	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751
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GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	/EL : 757 : 3.32 : + 0.25 : 540 : -6.04 : + 0.25 : 890 : 16.40 : + 0.25 : 837 : 10.00 : + 0.25	rack travel mm : 4.00 Rated speed rpm : 790 Tolerance 1/min : + 7 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 ASSEMBLY GOVERNOR SETTING Rated speed rpm : 750 rack travel mm : 10.80 Rated speed rpm : 788 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Rated speed rpm : 751 Rated speed rpm : 751 rack travel mm : 751 rack travel mm : 751 rack travel mm : 751

rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 752
rack travel mm	: 10.80
Rated speed rpm	: 790
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 10.80
Rated speed rpm	791
Tolerance 1/min	+ 4
rack travel mm	4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 10.80
Rated speed rpm	: 792
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 10.80
Rated speed rpm	: 793
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850

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Rated speed rpm : 700 rack travel mm : 11.80 Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 752
Tolerance 1/min : + 3

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: : : +-	300 4.60 0.30
Del. quantity cm3/1000 strokes	:	25.0
Tolerance cm3/1000 strokes	: +-	2.5
Check tolerance cm3/1000s.	: +-	5.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.04.95 Test oil : ISO 4113

Combination No. : 0 401 846 993

Injection pump

Pump designation : PE6P110A720RS3348 EP type number : 0 411 816 797

Governor

Governer design. : RQV250...1200PA413

: -8

Governer no. : 0 421 814 147

Cust. part No. : 612.60.08.0217

Customer-spec. information

Customer : SNF
Motor : WD612.36
Power KW : 135.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 210
Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.65
Tolerance mm : + 0.50

Check

tolerance mm : + 0.10

Rack travel in mm : 14.30 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance *NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 14.30 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 1.0

	l guida al agua
Check tolerance	guide sleeve travel mm : 11.50
cm3/1000s. : + 4.0	F travet mm : 17.50 F Tolerance mm : +~ 0.50
CM5/(UUU5. : +- 4.U	- Toterance mm : +- U.DU
Canood	
Spreed - Tolerance -	CUTAT OF ELLE DOCUTION
	GUIDE SLEEVE POSITION
cm3/1000 strokes : 4.0 -	Datad aread area 4700
Ohaal, dalamana	- Rated speed rpm : 1390
Check tolerance	
cm3/1000s. : 7.5	Rack travel in mm: 12.80
	Tolerance mm : + 1.30
Rated speed rpm : 250	
Park America Science (F 00)	PINE LOSS SELTIMONU ST FINE LOSS STOP
Rack travel in mm: 5.00	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30	
Del. quantity	Rated speed rpm : 1200
cm3/1000 strokes : 12.0 -	- Aneroid pressure
Tolerance	hPa : 700
cm3/1000 strokes : + 3.0 -	- Del. quantity
Check tolerance	cm3/1000 strokes : 145.0
cm3/1000s. : +- 6.0 -	- Tolerance
Spreed	- cm3/1000 strokes : +- 1.0
Tolerance -	- Check tolerance
cm3/1000 strokes : 4.5	- cm3/1000s. : + 4.0
Check tolerance	- Spreed
cm3/1000s. : 7.5	- Tolerance
+	- cm3/1000 strokes : 4.0
-	- Check tolerance
(B) SETTING OF INJECTION PUMP	- cm3/1000s, : 7.5
WITH GOVERNOR	•
- 	•
	CONTROL A EVED
GUIDE SLEEVE TRAVEL	- CONTROL LEVER
	•
Rated speed rpm : 250	- control lever
Rated speed rpm : 250 guide sleeve	- control lever - position degree : 103.0
Rated speed rpm : 250 guide sleeve travel mm : 0.44	- control lever
Rated speed rpm : 250 guide sleeve	control lever position degree : 103.0 tolerance degree : +- 4.0
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20	- control lever - position degree : 103.0
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257	control lever position degree : 103.0 tolerance degree : +- 4.0 RATED SPEED
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve	control lever position degree : 103.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.30
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve	control lever position degree : 103.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.30
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 740 guide sleeve travel mm : 4.26	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 4.26 Tolerance mm : + 0.25	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 4.26 Tolerance mm : + 0.25 Rated speed rpm : 1458	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
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Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 4.26 Tolerance mm : + 0.25 Rated speed rpm : 1458 guide sleeve travel mm : 1458 guide sleeve travel mm : 10.60	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500 LOW IDLE
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 4.26 Tolerance mm : + 0.25 Rated speed rpm : 1458 guide sleeve	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500 LOW IDLE
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 4.26 Tolerance mm : + 0.25 Rated speed rpm : 1458 guide sleeve travel mm : 10.60 Tolerance mm : + 0.25	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500 LOW IDLE control lever position degree : 69.0
Rated speed rpm : 250 guide sleeve travel mm : 0.44 Tolerance mm : + 0.20 Rated speed rpm : 1257 guide sleeve travel mm : 7.36 Tolerance mm : + 0.15 Rated speed rpm : 1080 guide sleeve travel mm : 6.04 Tolerance mm : + 0.25 Rated speed rpm : 740 guide sleeve travel mm : 4.26 Tolerance mm : + 0.25 Rated speed rpm : 1458 guide sleeve travel mm : 1458 guide sleeve travel mm : 10.60	control lever position degree : 103.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.30 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500 LOW IDLE

Rated speed rpm rack travel mm	: 250 : 5.00
Tolerance mm	: + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 360 : ← 20
Rated speed rpm	: 150
CRT mm min.	: > 6.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 14.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.30 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 14.30 : + 0.05
MEASUREMENT	
Rated speed rpm rack travel mm	: -500 : 12.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 12.80
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.80 : + 0.10

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 700 : 139.0 : +- 3.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 13.30 : 1245 : + 5
STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 12.80 : + 0.10 : 118.0 : + 10.0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 100 : 12.80 : + 0.10 : 118.0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 12.80 : + 0.10 : 118.0 : + 10.0

cm3/1000s.	:	7.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 646 785

Injection pump

Pump designation : PE6P12DA32DLS7869 EP type number : 0 412 626 887

Governor

Governer design. : RQV300...1050PA1078K

Governer no. : 0 421 815 359

Cust. part No. : 9275445

Customer spec. information
Customer : LIEBHERR
Motor : D 9406 TI
Power KW : 300.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 165 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-6-3-5-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.00 Tolerance mm: + 0.05

Del. quantity cm3/1000 strokes : 279.0

CHO/ 1000 SCIORES . 217.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

1000s. : +- 4.0

	T
Spreed	+ Rated speed rpm : 1320
Tolerance	+ guide sleeve
cm3/1000 strokes : 5.0	
	+ Tolerance mm : + 0.50
Check tolerance	†
cm3/1000s. : 9.0)
	+ GUIDE SLEEVE POSITION
Rated speed rpm : 300	+
	+ Rated speed rpm : 1185
Rack travel in mm: 6.10) +
Tolerance mm : + 0.10	Rack travel in mm: 10.80
Del. quantity	+ Tolerance mm : $+$ 1.30
cm3/1000 strokes : 50.0	1
Tolerance	
cm3/1000 strokes : $+$ 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	
cm3/1000s. : + 6.0	Rated speed rpm : 1050
Spreed	+ Aneroid pressure
Tolerance	+ hPa : 1550
cm3/1000 strokes : 6.0	
Check tolerance	+ cm3/1000 strokes : 279.0
cm3/1000s. : 10.0	
(110) (000)	+ cm3/1000 strokes : + 1.0
	Check tolerance
(B) SETTING OF INJECTION PUM	
WITH GOVERNOR	Spreed + Spreed
WITH GOVERNOR	Tolerance
GUIDE SLEEVE TRAVEL	Check tolerance
GOIDE STEENE IMAVEL	+ cm3/1000s. : 9.0
Rated speed rpm : 300	T CMD/10003 9.0
	#
audala alasua	i i
guide sleeve	,
travel mm : 1.69	
travel mm : 1.69 Tolerance mm : + 0.25	CONTROL LEVER
travel mm : 1.69 Tolerance mm : + 0.25 Rated speed rpm : 1117	CONTROL LEVER control lever
travel mm : 1.69 Tolerance mm : ← 0.25 Rated speed rpm : 1117 guide sleeve	control lever position degree : 121.0
travel mm : 1.69 Tolerance mm : + 0.25 Rated speed rpm : 1117 guide sleeve travel mm : 10.38	control lever position degree : 121.0 tolerance degree : +- 4.0
travel mm : 1.69 Tolerance mm : ← 0.25 Rated speed rpm : 1117 guide sleeve	control lever position degree : 121.0 tolerance degree : + 4.0
travel mm : 1.69 Tolerance mm : ← 0.25 Rated speed rpm : 1117 guide sleeve travel mm : 10.38 Tolerance mm : ← 0.25	control lever position degree : 121.0 tolerance degree : +- 4.0
travel mm : 1.69 Tolerance mm : ← 0.25 Rated speed rpm : 1117 guide sleeve travel mm : 10.38 Tolerance mm : ← 0.25 Rated speed rpm : 746	control lever position degree : 121.0 tolerance degree : +- 4.0 RATED SPEED
travel mm : 1.69 Tolerance mm : ← 0.25 Rated speed rpm : 1117 guide sleeve travel mm : 10.38 Tolerance mm : ← 0.25 Rated speed rpm : 746 guide sleeve	control LEVER control lever position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00
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travel mm : 1.69 Tolerance mm : ← 0.25 Rated speed rpm : 1117 guide sleeve travel mm : 10.38 Tolerance mm : ← 0.25 Rated speed rpm : 746 guide sleeve	control Lever control lever position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.00 Rated speed rpm : 1105
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control lever	1	Pressure hPa : 725
position degree	: 74.0	rack travel mm : 10.70
tolerance degree	: + 4.0 +	Tolerance mm : $+$ 0.05
Testing:	<u> </u>	Pressure hPa : 525
_	+	rack travel mm : 9.50
		Tolerance mm : + 0.10
	: 6.10 + : + 0.10 +	
10tor arros rimi	1	START CUT-OUT
Rated speed rpm	: 200	200
CRT mm min.	: > 8.00	Rated speed rpm : > 100 Rated speed rpm : < 220
OILE HAR THEETS	1	Nated Speed Ppill Z20
Rated speed rpm	: 400	Check
		speed 1/min :> 80 Check
TORQUE CONTROL	I	speed 1/min : < 240
	+	- Land Control of the
Rated speed rpm	: 1050 : 12.00	FUEL OF THEON CHARACTERISTS
	: + 0.05	FUEL DELIVERY CHARACTERISTICS
	+	Aneroid pressure
	: 800	hPa : 1550
	: 11.65 : + 0.10	Rated speed rpm : 800 Del. quantity
TO CET diffee min	1	cm3/1000 strokes : 295.0
Rated speed rpm	: 500 +	Tolerance
	: 9.75 : + 0.10	cm3/1000 strokes : + 3.0
Tolerance mm	: - 0.10	Check tolerance cm3/1000s. : + 6.0
Rated speed rpm	: 950	
	: 11.85	Aneroid pressure
Tolerance mm	: ← 0.10 ±	hPa : 1550 Rated speed rpm : 500
Rated speed rpm	: 600	Del. quantity
rack travel mm	: 10.25	cm3/1000 strokes : 270.0
Tolerance mm	: + 0.10 +	Tolerance cm3/1000 strokes : +3.0
	I	Check tolerance
ANEROID/ALTITUDE	+	cm3/1000s. : +- 6.0
COMPENSATOR TEST	†	Amenaid managemen
	Ī	Aneroid pressure hPa : -
SETTING	+	Rated speed rpm : 550
Bakad amad man	. 1050	Del. quantity
Rated speed rpm : Pressure hPa :	: 1050 : 1550	cm3/1000 strokes : 250.0 Tolerance
rack travel mm	12.00	cm3/1000 strokes : + 1.0
Tolerance mm	: + 0.05 +	Check tolerance
MEASUREMENT	1	cm3/1000s. : +- 4.0 Spreed
PIEMOUNEPIEM	Ţ	Tolerance
Pressure hPa	: +	cm3/1000 strokes : 8.0
Rated speed rpm	: 1050 : 9.35	Check tolerance cm3/1000s. : 12.0
rack travel mm : Tolerance mm :	+ 0.10	cm3/1000s. : 12.0
	+	
Rated speed rpm :	1050 +	BREAKAWAY

D12

Rack travel in mm: 11.00
Rated speed rpm: 1105
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.55 Tolerance mm : + 0.20 Del. quantity

cm3/1000 strokes : 170.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 300 rack travel mm 6.10 Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 50.0 Tolerance 3.0 cm3/1000 strokes Check tolerance cm3/1000s. 6.0 Spreed Tolerance 6.0 cm3/1000 strokes : Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.08.95 Test oil : ISO 4113

Combination No. : 0 402 648 797

Injection pump

Pump designation : PE8P120A320LS7873 EP type number : 0 412 628 880

Governor

Governer design. : RQ750PA1231 Governer no. : 0 421 801 791

Cust. part No. : 04222112KY0165-17

Customer-spec. information

Customer : KHD

Motor : BF8M1015/C

Power KW : 318.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.05
Tolerance mm : + 0.05

Check tolerance min : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-8-7-2-6 :-5-4-3

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Barrel no. : '

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.30 Tolerance mm: \div 0.05

Del. quantity

cm3/1000 strokes : 365.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s.

: +- 4.0

,	
Connect	- Aneroid pressure
Spreed	- hPa : -
Tolerance cm3/1000 strokes : 5.0	- Del. quantity - cm3/1000 strokes : 365.0
CIRD/ 1000 Strokes : 3.0	- Tolerance
Check tolerance	- roterance - cm3/1000 strokes : +- 1.0
cm3/1000s. : 9.0	
Cm5/(UUU5. : 9.0	- Check tolerance - cm3/1000s. : +- 4.0
Rated speed rpm : 300	
Rated Speed rpm : 500	- Spreed - Tolerance
Rack travel in mm: 4.70	- cm3/1000 strokes : 5.0
Tolerance mm : + 0.20	- Check tolerance
Del. quantity	- cm3/1000s. : 9.0
cm3/1000 strokes : 20.0	- (115) (000) 9.0
Tolerance	- -
cm3/1000 strokes : + 3.0	
Check tolerance	- CONTROL LEVER
cm3/1000s. : +- 6.0	-
Spreed	- control lever
Tolerance	position degree : 109.0
cm3/1000 strokes : 8.0	tolerance degree : +- 4.0
Check tolerance	
cm3/1000s. : 12.0	RATED SPEED
	•
4	rack travel mm : 0.50
(B) SETTING OF INJECTION PUMP	Tolerance mm : +- 0.50
WITH GOVERNOR +	Rated speed rpm : 900
+	
	ASSEMBLY GOVERNOR SETTING
GUIDE SLEEVE TRAVEL	·
.	Rated speed rpm : 750
Rated speed rpm : 768	rack travel mm : 12.30
guide sleeve	
travel mm : 6.28	Rated speed rpm : 780
Tolerance mm : ← 0.15	Tolerance 1/min : + 4
2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	rack travel mm : 5.50
Rated speed rpm : 610	mode though mm a 0.50
guide sleeve + travel mm : 0.52 +	rack travel mm : 0.50 Tolerance mm : +- 0.50
	5 1 1 - 000
Tolerance mm : + 0.25	Rated speed rpm : YUU
Rated speed rpm : 900	Rated speed rpm : 751
guide sleeve	rack travel mm : 12.30
travel mm : 14.60	ides eldaer inni
Tolerance mm : + 0.15	Rated speed rpm : 781
Total dipo nam	Tolerance 1/min : +- 4
Rated speed rpm : 866	rack travel mm : 5.50
guide sleeve	
travel mm : 12.00 +	rack travel mm : 0.50
Tolerance mm : + 0.25	Tolerance mm : \leftarrow 0.50
+	
Rated speed rpm : 930 +	Rated speed rpm : 752
guide sleeve +	rack travel mm : 12.30
travel mm : 13.50 +	
Tolerance mm : \leftarrow 0.50	Rated speed rpm : 782
+	Tolerance 1/min : +- 4
+	rack travel mm : 5.50
FULL LOAD DELIVERY AT FULL LOAD STOP	
t	rack travel mm : 0.50
Rated speed rpm : 700 +	Tolerance mm : \leftarrow 0.50

Rated speed rpm	: 900	
Rated speed rpm rack travel mm		
Rated speed rpm Tolerance 1/min rack travel mm	: 783 : +- 4 : 5.50	
rack travel mm Tolerance mm	: 0.50 : + 0.50	
Rated speed rpm rack travel mm	: 754 : 12.30	
Rated speed rpm Tolerance 1/min rack travel mm	: 784 : ← 4 : 5.50	
rack travel mm Tolerance mm Rated speed rpm		
Rated speed rpm rack travel mm	: 755 : 12.30	
Rated speed rpm Tolerance 1/min rack travel mm	: 785 : +- 4 : 5.50	
rack travel mm Tolerance mm	: 0.50 : + 0.50	
TORQUE CONTROL		
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.30 : ← 0.05	
START CUT-OUT		
Rated speed rpm Rated speed rpm		
Check speed 1/min Check	: > 80	

rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 300 : 4.70 : +- 0.20 : 20.0 : +- 3.0 : +- 6.0 : 8.0 : 12.0

End of test specification sheet

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 678 826

Injection pump

Pump designation : PE8P120A320LS7878 EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589 Governer no. : 0 421 833 449

30 VETTICE 110. . . . 421 033 44

Cust. part No. : 9275722

Customer—spec. information
Customer : LIEBHERR
Motor : D 9308 TI
Power KW : 330.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50Tolerance mm : $\leftarrow 1.50$

Firing order : 1-8-7-2-6 :-3-5-4

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: + 0.50

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 259.0

Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0

+	
Spreed + Tolerance +	CONTROL LEVER
cm3/1000 strokes : 5.0	CONTROL LEVER
-	control lever
Check tolerance +	position degree : 100.0
cm3/1000s. : 9.0 +	tolerance degree : + 4.0
+	
Rated speed rpm : 400 +	RATED SPEED
Rack travel in mm: 4.60 +	rack travel mm : 12.30
Tolerance mm : +- 0.20	Rated speed rpm : 940
Del. quantity	Tolerance 1/min : ÷ 5
cm3/1000 strokes : 20.0	10001 41100 17 11111
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : + 3.0 +	Rated speed rpm : 1000
Check tolerance +	Tolerance 1/min : + 15
cm3/1000s. : + 6.0 +	
Spreed	rack travel mm : 0.85
Tolerance + cm3/1000 strokes : 6.0 +	Tolerance mm : + 0.55
cm3/1000 strokes : 6.0 + Check tolerance	Rated speed rpm : 1160
cm3/1000s. : 10.0	rack travel mm : 4.00
10.0	Rated speed rpm : 1020
1	nated opeoa (pin 1 Tous
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	
+	LOW IDLE
†	
GUIDE SLEEVE POSITION	control lever
GOIDE SECEVE POSITION	position degree : 76.0
Rated speed rpm : 800	tolerance degree : + 4.0
+	
Rack travel in mm: 0.50	Setting point w/out bumper spring
Tolerance mm : + 0.20 +	
·	Rated speed rpm : 400
governor spring	rack travei mm : 3.40
pre-tension + click setting x : 4.00 +	Testing:
Territorial territ	reschig.
	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.60
+	Tolerance mm : + 0.20
Rated speed rpm : 900	2.00
Aneroid pressure	rack travel mm : 2.00
hPa : 1200 +	Rated speed rpm : 500 Tolerance 1/min : +- 30
Del. quantity + cm3/1000 strokes : 259.0 +	Tolerance 1/min : +- 3U
Tolerance	
cm3/1000 strokes : +- 1.0 +	TORQUE CONTROL
Check tolerance	
cm3/1000s. : +- 4.0	Rated speed rpm : 900
Spreed	rack travel mm : 13.30
Tolerance	Tolerance mm : \leftarrow 0.05
cm3/1000 strokes : 5.0	Dated around rest . FOO
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 500 rack travel mm : 13.30
cm3/1000s. : 9.0	Tolerance mm : + 0.05
I	roterance min
· · ·	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rom 500 1200 Pressure hPa 13.30 rack travel mm Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 11.90 rack travel mm Tolerance mm : + 0.15

500 Rated speed rpm

900 Pressure hPa 12.90 rack travel mm : **←** 0.05 Tolerance mm

800 Pressure hPa : rack travel mm 12.40 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1200 Rated speed rpm 500 Del. quantity cm3/1000 strokes : 275.0 Tolerance

cm3/1000 strokes

Check tolerance cm3/1000s. 6.0

Aneroid pressure

hPa 500 Rated speed rpm Del. quantity

cm3/1000 strokes : 233.0

Tolerance

cm3/1000 strokes

Check tolerance cm3/1000s.

4.0

3.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

BREAKAWAY

Rack travel in mm: 12,30 Rated speed rpm Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rom 100 rack travel mm 20.50 : + 0.50Tolerance mm Del. quantity cm3/1000 strokes : 215.0

Tolerance

cm3/1000 strokes : +-20.0

Check tolerance

cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 400 rack travel mm 4.60 Tolerance mm 0.20 Del. quantity cm3/1000 strokes 20.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000S.: +-6.0 Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 678 826A

Injection pump

Pump designation : PE8P12OA32OLS7878 EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589 Governer no. : 0 421 833 449

Cust. part No. : 9275722

Customer—spec. information Customer : LIEBHERR Motor : D 9308 TI Power KW : 330.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-8-7-2-6 :-3-5-4

: - 3- 5- 4

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: + 0.50

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 13.30
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 259.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

000s. : +- 4.0

Sansad -	-
Spreed Tolerance	- CONTROL LEVER
cm3/1000 strokes : 5.0	CONTINUE EEVEN
	- control lever
Check tolerance	position degree : 100.0
cm3/1000s. : 9.0	tolerance degree : +- 4.0
Rated speed rpm : 400	RATED SPEED
Rack travel in mm: 4.60	rack travel mm : 12.30
Tolerance mm : + 0.20 - Del. quantity	Rated speed rpm : 940 Tolerance 1/min : +- 5
cm3/1000 strokes : 20.0	- Total and Dimity
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : + 3.0 Check tolerance	- Rated speed rpm : 1000 - Tolerance 1/min : +- 15
cm3/1000S. : + 6.0	Tolerance 1/min : +- 15
Spreed	rack travel mm : 0.85
Tolerance	Tolerance mm : +- 0.55
cm3/1000 strokes : 6.0 - Check tolerance	- Rated speed rpm : 1160
cm3/1000s. : 10.0	- rack travel nm : 4.00
	- Rated speed rpm : 1020
	-
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	- LOW IDLE
+	-
	_
CUIDE CLEENE POSTITION	control lover
GUIDE SLEEVE POSITION	- control lever - position degree : 76.0
GUIDE SLEEVE POSITION Rated speed rpm : 800	- control lever - position degree : 76.0 - tolerance degree : + 4.0
Rated speed rpm : 800	position degree : 76.0 tolerance degree : + 4.0
Rated speed rpm : 800 Rack travel in mm : 0.50	- position degree : 76.0
Rated speed rpm : 800	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	position degree : 76.0 tolerance degree : + 4.0
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing:
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20 rack travel mm : 2.00
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20 rack travel mm : 2.00 Rated speed rpm : 500
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20 rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20 rack travel mm : 2.00 Rated speed rpm : 500
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : 4.60 Tolerance mm : 500 Rated speed rpm : 500 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 900
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20 rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 93.30
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : 4.60 Tolerance mm : 500 Rated speed rpm : 500 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 900
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : + 0.20 rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 93.30
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.40 Testing: Rated speed rpm : 400 rack travel mm : 4.60 Tolerance mm : 4.60 Tolerance mm : 2.00 Rated speed rpm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 13.30 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 13.30
Tolerance mm : ← 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 12.00
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 900 rack travel mm : 12.90 Tolerance mm : + 0.05

Pressure hPa : 850 rack travel mm : 12.40 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 275.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : + 6.0

Aneroid pressure

hPa : -Rated speed rpm : 550

Del. quantity

cm3/1000 strokes : 233.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : \leftarrow 4.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

BREAKAWAY

Rack travel in mm: 12.30
Rated speed rpm: 940
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity

cm3/1000 strokes : 200.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 400 rack travel mm 4.60 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes 3.0 : +-Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 678 826B

Injection pump

Pump designation : PE8P120A320LS7878 EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589

Governer no. : 0 421 833 449

Cust. part No. : 9275722

Customer—spec. information Customer : LIEBHERR Motor : D 9308 TI Power KW : 330.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}C$: 40 Tolerance $^{\circ}C$: \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50Tolerance mm : + 1.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance "NW : \leftarrow 0.50

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 259.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

: +- 4.0

Spreed rack travel mm : Tolerance Rated speed rpm : cm3/1000 strokes : 5.0 Tolerance 1/min : +-	/ 00
Tolerance + Rated speed rpm : cm3/1000 strokes : 5.0 + Tolerance 1/min : +-	<u> </u>
cm3/1000 strokes : 5.0 + Tolerance 1/min : +-	
	A ==

	0.85
cm3/1000s. : 9.0 + Tolerance mm : +-	0.55
+ Rated speed rpm :	1200
Rated speed rpm : 400	
	4.00
Rack travel in mm: 4.95 + Rated speed rpm:	1075
Tolerance mm : + 0.20	
Del. quantity	
cm3/1000 strokes : 25.0 +	
cm3/1000 strokes : + 3.0 + Low IDLE	
Check tolerance Setting point w/out but	aner enring
cm3/1000s. : + 6.0	ither spring
Spreed + Rated speed rpm :	400
Tolerance + rack travel mm :	
cm3/1000 strokes : 6.0 +	-
Check tolerance + Testing:	
cm3/1000s. : 10.0 +	
	400
	4.95
	0.20
WITH GOVERNOR	2.00
	2.00
Rated speed rpm : Tolerance 1/min : +	440 30
GUIDE SLEEVE POSITION +	30
double office to deliver	
governor spring + TORQUE CONTROL	
pre-tension +	
click setting x : 4,00 + Rated speed rpm :	900
click setting x : 4,00 + Rated speed rpm : rack travel mm :	13.30
+ rack travel mm : + Tolerance mm : +	900 13.30 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP + rack travel mm : +	13.30 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm :	13.30 0.05 500
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	13.30 0.05 500 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure Rack travel mm : rack travel mm : Tolerance mm : +	13.30 0.05 500
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 rack travel mm : Tolerance mm : Tolerance mm : Tolerance mm :	13.30 0.05 500 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity rack travel mm : Tolerance mm : Tolerance mm : Tolerance mm : Tolerance mm :	13.30 0.05 500 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Rack travel mm : Tolerance mm : + Tolerance mm : + Tolerance mm : + Tolerance mm : +	13.30 0.05 500 13.30
rack travel mm : Tolerance mm : + FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 rack travel mm : rack travel mm : rack travel mm : Aneroid pressure ANEROID/ALTITUDE	13.30 0.05 500 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	13.30 0.05 500 13.30
rack travel mm : Tolerance mm : + FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	13.30 0.05 500 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance mm : + Tolerance mm : + Tolerance mm : + Anteroid pressure ANEROID/ALTITUDE COMPENSATOR TEST SETTING	13.30 0.05 500 13.30 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance Tolerance Rated speed rpm : Tolerance mm : + T	13.30 0.05 500 13.30 0.05
rack travel mm : Tolerance mm : + FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Rated speed rpm : rack travel mm : rack travel	13.30 0.05 500 13.30 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance	13.30 0.05 500 13.30 0.05 500 200 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance	13.30 0.05 500 13.30 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 Rated speed rpm : rack travel mm : Tolerance mm : + ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : Pressure hPa : 1 Tolerance mm : + Tolerance mm : +	13.30 0.05 500 13.30 0.05 500 200 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 Rated speed rpm : Tolerance mm : + ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : Pressure hPa : 1 Tolerance mm : + MEASUREMENT	13.30 0.05 500 13.30 0.05 500 200 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 Rated speed rpm : Tolerance mm : + ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : Pressure hPa : 1 Tolerance mm : + MEASUREMENT MEASUREMENT	13.30 0.05 500 13.30 0.05 500 200 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 259.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 Rated speed rpm : rack travel mm : rack travel mm : rack travel mm : ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : Pressure hPa : 1 Tolerance mm : + MEASUREMENT Pressure hPa :	13.30 0.05 500 13.30 0.05 500 200 13.30 0.05
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	13.30 0.05 500 13.30 0.05 500 200 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	13.30 0.05 500 13.30 0.05 500 200 13.30 0.05

Rated speed rpm	: 500
Pressure hPa	: 900
rack travel mm	: 12.30
Tolerance mm	: ← 0.05
	· · · · · · ·
Pressure hPa	: 800
rack travel mm	: 11.80
Tolerance mm	: +- 0.10
FUEL DELIVERY CHARACTERISTICS	
Aneroid pressure	
hPa	: 1200
Rated speed rpm	: 500
Del. quantity	• 500
cm3/1000 strokes	: 275.0
	. 217.0
Tolerance	70
cm3/1000 strokes	: ← 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Aneroid pressure	
hPa	•
	500
Rated speed rpm	. 200
Del. quantity	. 247.0
cm3/1000 strokes	: 217.0
Tolerance	
cm3/1000 strokes	: 1.0
Check tolerance	
cm3/1000s.	: ← 4.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000S.	: 12.0
	16.0
BREAKAWAY	
Dook tooyol for	: 12.30
Rack travel in mm	: 990
Rated speed rpm	• • • •
Tolerance 1/min	: +- 5
STARTING FUEL DELIVERY	
Dahad aasad	. 100
Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: ← 0.50
Del. quantity	
cm3/1000 strokes	: 200.0
cm3/1000 strokes	: +- 10.0
Tolerance cm3/1000 strokes	

Check tolerance cm3/1000s. : +- 14.0 LOW IDLE Rated speed rpm : 400 rack travel mm 4.95 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 746 954

Injection pump

Pump designation : PES6P120A720RS7301 EP type number : 0 412 726 900

Governor

Governer design. : RQV300...1050PA1090K

Governer no. : 0 421 815 362

Cust. part No. : 9275449

Customer—spec. information
Customer : LIEBHERR
Motor : D 926 TI
Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.75
Tolerance mm : + 0.05
Check

Lneck

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance °NW : + 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 14.35 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 240.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 1320 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
cm3/1000s. : 9.0	CITAL CLERKE POSTTAN
Rated speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm: 6.10	Rated speed rpm : 1170
Tolerance mm : + 0.20 Del. quantity	Rack travel in mm: 13.00 Tolerance mm: + 1.30
cm3/1000 strokes : 25.0 Tolerance	
cm3/1000 strokes : +- 3.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : +- 6.0 Spreed	Rated speed rpm : 1050 Aneroid pressure
Tolerance cm3/1000 strokes : 6.0	+ hPa : 1600 + Del. quantity
Check tolerance cm3/1000s. : 10.0	cm3/1000 strokes : 240.0 Tolerance
	cm3/1000 strokes : +- 1.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000s. : + 4.0 Spreed Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : 5.0 Check tolerance
	cm3/1000s. : 9.0
Rated speed rpm : 300 guide sleeve	‡
travel mm : 1.69 Tolerance mm : + 0.15	CONTROL LEVER
Rated speed rpm : 1117	control lever
guide sleeve travel mm : 10.38	<pre>position degree : 121.0 tolerance degree : + 4.0</pre>
Tolerance mm : + 0.20	+
Rated speed rpm : 746	RATED SPEED
guide sleeve travel mm : 6.20	rack travel mm : 13.35 Rated speed rpm : 1080
Tolerance mm : + 0.25	Tolerance 1/min : + 5
Rated speed rpm : 353 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1180
travel mm : 2.45	Tolerance 1/min : + 15
Tolerance mm : + 0.25	t rack travel mm : 0.50
Rated speed rpm : 403 guide sleeve	Tolerance mm : + 0.50 Rated speed rpm : 1300
travel mm : 3.18 Tolerance mm : + 0.25	+
	T
Rated speed rpm : 450 guide sleeve	+ LOW IDLE
travel mm : 3.66	+ control lever
Tolerance mm : +- 0.25	position degree : 79.0

tolerance degree : +-	4.0	Rated speed rpm	: 1050
Testing:	, -	Pressure hPa rack travel mm	
Rated speed rpm : 35	io ‡	Tolerance mm	
rack travel mm : 6	.10 +		/50
Tolerance mm : + 0	†	Pressure hPa	: 650 : 12.95
Rated speed rpm : 25	in I	rack travel mm Tolerance mm	: + 0.10
	<u> </u>	7 Octor di 100 min	
CRT mm min. :> 9	1.10	START CUT-OUT	
Rated speed rpm : 47	5 +		
	+	Rated speed rpm	
TORQUE CONTROL		Rated speed rpm	: < 270
TORQUE CONTROL	Ī	Check	
Rated speed rpm : 105	o 1	speed 1/min	: > 80
rack travel mm : 14 Tolerance mm : + 0	.35	Check	
Tolerance mm : + 0	+	speed 1/min	: < 290
Pated speed nom	o		
Rated speed rpm : 95 rack travel mm : 13	.85 I	FUEL DELIVERY CHA	RACTERISTICS
rack travel mm : 13 Tolerance mm : + 0	. 40	TOUR PRESENT OFF	THE PERSON
	.10 .70 .10 .35 .10 .85 .10	Aneroid pressure	
Rated speed rpm : 90	0	hPa	: 1600
rack travel mm : 13 Tolerance mm : + 0	10 +	Rated speed rpm Del. quantity	: 800
roterance man o	· io	cm3/1000 strokes	: 219.0
Rated speed rpm : 80	o ‡	Tolerance	
rack travel mm : 13	.35	cm3/1000 strokes	: + 3.0
Tolerance mm : + 0	.10 +	Check tolerance	
Rated speed rpm : 60	n †	cm3/1000s.	: + 6.0
rack travel mm : 12	.85 I	Aneroid pressure	
rack travel mm : 12 Tolerance mm : + 0	.10	hPa	: 1600
	+	Rated speed rpm	: 500
Rated speed rpm : 500 rack travel mm : 12	0 +	Del. quantity	
Tolerance mm : 12	.85	cm3/1000 strokes Tolerance	: 204.0
rocerance issu	· T	cm3/1000 strokes	: 3.0
		Check tolerance	
ANEROID/ALTITUDE	+	cm3/1000s.	: +- 6.0
COMPENSATOR TEST	†	Annuald massins	
	Ī	Aneroid pressure hPa	•
SETTING	I	Rated speed rpm	: 600
	+	Del. quantity	
Rated speed rpm : 1050		cm3/1000 strokes	: 185.0
Pressure hPa : 1600		Tolerance cm3/1000 strokes	1.0
rack travel mm : 14. Tolerance mm : + 0.		Check tolerance	: 1.0
TO COT OF THE STATE OF THE STAT	Ţ	cm3/1000s.	: + 4.0
MEASUREMENT	+	Spreed	
	+	Tolerance	
Pressure hPa : - Rated speed rpm : 1050	†	cm3/1000 strokes Check tolerance	: 8.0
Rated speed rpm : 1050 rack travel mm : 11.		cm3/1000s.	: 12.0
Tolerance mm : + 0.			
	ì		

BREAKAWAY

Rack travel in mm: 13.35
Rated speed rpm: 1080
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.85 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 350 rack travel mm 6,10 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 25.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.05.95 Test oil : ISO 4113

Combination No. : 0 402 746 954A

Injection pump

Pump designation : PES6P120A720RS7301 EP type number : 0 412 726 900

Governor

Governer design. : RQV300...1050PA1090K

Governer no. : 0 421 815 362

Cust. part No. : 9275449

Customer-spec. information Customer : LIEBHERR : D 926 TI Motor Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 115
Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm : 4.75 : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 14.35 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 240.0

Tolerance

Check tolerance cm3/1000s. : +- 4.0	- guide sleeve - travel mm : 3.66 - Tolerance mm : +- 0.25
Spreed Tolerance	-
cm3/1000 strokes : 5.0	- guide sleeve
Check tolerance cm3/1000s. : 9.0	- travel mm : 13.50 - Tolerance mm : +- 0.50
cm3/1000S. : 9.0	
Rated speed rpm : 350	- GUIDE SLEEVE POSITION
Rack travel in mm: 6.10	- Rated speed rpm : 1170
Tolerance mm : + 0.20	Pook though in the a 47.00
Del. quantity + cm3/1000 strokes : 25.0 +	- Rack travel in mm : 13.00 - Tolerance mm : +- 1.30
Tolerance	- Toterance min : - 1.50
cm3/1000 strokes : +- 3.0 +	
Check tolerance + 6.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	Rated speed rpm : 1050
Tolerance +	Aneroid pressure
cm3/1000 strokes : 6.0	- hPa : 1600
Check tolerance	Del. quantity
cm3/1000s. : 10.0	- cm3/1000 strokes : 240.0 - Tolerance
\mathbf{I}	cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION PUMP	Check tolerance
WITH GOVERNOR	cm3/1000s. : +- 4.0
+	Spreed
GUIDE SLEEVE TRAVEL	Tolerance cm3/1000 strokes : 5.0
+	Check tolerance
Rated speed rpm : 300 + guide sleeve +	cm3/1000s. : 9.0
travel mm : 1.69	
Tolerance mm : + 0.15	AANTAAL 1 EUGA
Rated speed rpm : 1117	CONTROL LEVER
guide sleeve	
	control lever
travel mm : 10.38	position degree : 121.0
travel mm : 10.38 Tolerance mm : + 0.20	
travel mm : 10.38 Tolerance mm : + 0.20	position degree : 121.0 tolerance degree : + 4.0
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746	position degree : 121.0
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20	position degree : 121.0 tolerance degree : + 4.0
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45 Tolerance mm : + 0.25 Rated speed rpm : 403 guide sleeve	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45 Tolerance mm : + 0.25 Rated speed rpm : 403 guide sleeve travel mm : 3.18	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45 Tolerance mm : + 0.25 Rated speed rpm : 403 guide sleeve	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45 Tolerance mm : + 0.25 Rated speed rpm : 403 guide sleeve travel mm : 3.18 Tolerance mm : + 0.25	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 10.38 Tolerance mm : + 0.20 Rated speed rpm : 746 guide sleeve travel mm : 6.20 Tolerance mm : + 0.25 Rated speed rpm : 353 guide sleeve travel mm : 2.45 Tolerance mm : + 0.25 Rated speed rpm : 403 guide sleeve travel mm : 3.18	position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1180 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50

control lever position degree tolerance degree Testing:	: 79.0 : + 4.0	† † † † †	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa	: 11.90 : + 0.10 : 1050 : 800
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.10 : +- 0.10	+	rack travel mm Tolerance mm Pressure hPa	: 13.75 : ← 0.05
Rated speed rpm		$\frac{1}{1}$	rack travel mm Tolerance mm	: 650 : 12.95 : + 0.10
CRT mm min.		Ŧ	START CUT-OUT	
Rated speed rpm	: 475		Rated speed rpm Rated speed rpm	: > 100
TORQUE CONTROL		Ī	Check	: < 210
Rated speed rpm rack travel mm	: 14.35	‡	speed 1/min Check	
Tolerance mm		Ī	speed 1/min	: < 290
Rated speed rpm rack travel mm Tolerance mm	: 13.85 : + 0.10	+	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.70 : + 0.10	† † †	Aneroid pressure hPa Rated speed rpm Del. quantity	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 13.35 : + 0.10	† †	cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 3.0
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.85	‡	cm3/1000s. Aneroid pressure hPa	: +- 6.0 : 1600
Rated speed rpm	: 500	Ŧ	Rated speed rpm Del. quantity	: 500
rack travel mm Tolerance mm		‡	cm3/1000 strokes Tolerance cm3/1000 strokes	
ANEROID/ALTITUDE COMPENSATOR TEST			Check tolerance cm3/1000s.	: +- 6.0
SETTING		‡	Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 600
Rated speed rpm Pressure hPa	: 1050 : 1400	Ī	cm3/1000 strokes Tolerance	: 185.0
rack travel mm Tolerance mm	: 14.35 : + 0.05	‡	cm3/1000 strokes Check tolerance	
MEASUREMENT		†	cm3/1000s. Spreed Tolerance	: +- 4.0
Pressure hPa	: -	Ī	cm3/1000 strokes	: 8.0

E04

Check tolerance cm3/1000s. 12.0 **BREAKAWAY** Rack travel in mm : 13.35 Rated speed rpm : 1080 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 12.85 : +- 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/1000s. : +- 14.0 LOW IDLE 350 Rated speed rpm rack travel mm 6.10 : + 0.20Tolerance mm Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000S. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.06.95 Edition Test oil : ISO 4113

Combination No. : 0 403 244 032

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

EP type number : 0 413 204 017

Governor

Governer design. : RQV300...1300MW132

: -1

Governer no. : 0 420 083 292

Cust. part No. : 0240741102

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm : 4.55 : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.00 Tolerance mm : +- 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : +- 0.50

Check

: **←** 0.75 tolerance "NW

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 13.60 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 123.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Spreed

Tolerance

5.0

Check tolerance		+
cm3/1000s.	: 8.0	Rated speed rpm : 1690
Rated speed rpm	: 300	+ guide sleeve + travel mm : 13.50
Nated Speed (pill	. 500	Tolerance mm : + 0.50
Rack travel in m		+
Tolerance mm	: +- 0.10	
Del. quantity cm3/1000 strokes	: 12.0	GUIDE SLEEVE POSITION
Tolerance	. 12.0	Rated speed rpm : 1500
cm3/1000 strokes	: ← 2.0	t table speed to the table to the table to the table to the table to the table to the table to the table to the table to the table to the table to
Check tolerance		Rack travel in mm : 10.00
cm3/1000s.	: +- 4.5	Tolerance mm : +- 2.00
Spreed Tolerance	·	
cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		1
cm3/1000s.	: 4.0	Rated speed rpm : 1300
		+ Aneroid pressure + hPa : 1200
(B) SETTING OF IN	NJECTION PUMP -	Del. quantity
WITH GOVERNOR	•	cm3/1000 strokes : 123.0
	-	Tolerance
GUIDE SLEEVE TRAN	/F) .	cm3/1000 strokes : +- 1.0 Check tolerance
GOIDE OFFERE THAT	-	cm3/1006s. : +- 4.0
Rated speed rpm	: 300 -	Spreed
guide sleeve	- 0.04	Tolerance
travel mm Tolerance mm	: 0.91 : + 0.25	cm3/1000 strokes : 5.0 Check tolerance
forei di ice iinii	. , 0.23	cm3/1000s. : 8.0
Rated speed rpm	: 1354	
guide sleeve		
travel mm Tolerance mm	: 7.77 : +- 0.25	CONTROL LEVER
rocer arree likir		- CONTROL LEVER
Rated speed rpm	: 1150 -	control lever
guide sleeve		position degree : 116.0
travel mm Tolerance mm	: 5.95 : +- 0.25	tolerance degree : +- 4.0
TOTAL GITCE (IN)		RATED SPEED
Rated speed rpm	: 629	
guide sleeve	7.45	rack travel mm : 12.60
travel mm Tolerance mm	: 3.15 : + 0.25	- Rated speed rpm : 1345 - Tolerance 1/min : +- 5
tocal di ica likil	0.2	- Total and Thirth
Rated speed rpm	: 679	- rack travel mm : 4.00
guide sleeve	7 /5	- Rated speed rpm : 1460
travel mm Tolerance mm	: 3.45 : + 0.25	- Tolerance 1/min : +- 15
TOTAL GITTE UNIT		rack travel mm : 0.50
Rated speed rpm	: 820	- Tolerance mm : +- 0.50
guide sleeve		- Rated speed rpm : 1550
travel mm Tolerance mm	: 4.09 : + 0.25	
TOTAL COM]	
Rated speed rpm	: 1596	- LOW IDLE
guide sleeve	. 12.00	-
travel mm Tolerance mm	: 12.00 : + 0.25	
TO CET GITTE THE	О.Е.	

control lever position degree tolerance degree	: 71.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 200
CRT mm min.	: > 4.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 13.60 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.60 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm	: 500 : 1200 : 13.60 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 1200
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm	: 1200 : 13.60 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 1200 : 13.60 : + 0.05 : - 500 : + 0.10
Rated speed rpm Pressure hPa rack travel mm	: 1200 : 13.60 : + 0.05 : + 0.05 : 500 : + 0.10 : 500 : 600 : 2.00
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 13.60 : + 0.05 : + 0.05 : 500 : + 0.10 : 500 : 600 : 2.00 : + 0.10 : 350 : 0.50

Check speed 1/min Check speed 1/min	: > 80 : < 220
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: ← 2.0 : ← 5.0
cm3/1000 strokes Check tolerance	: 6.0
cm3/1000s.	: 9.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.60 : 1345 : ← 5
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Data dan and man	: 300 : 3.90

Tolerance mm Del. quantity	: +-	0.10
cm3/1000 strokes	:	12.0
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed	•	4.5
Tolerance cm3/1000 strokes	6	2.0
Check tolerance cm3/1000s.	6	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.06.95 Test oil : ISO 4113

Combination No. : 0 403 244 033

Injection pump

Pump designation: PES4MW100/720RS1519

: -2

EP type number : 0 413 204 017

Governor

Governer design. : RQV300...1300MW132

: -1

: 0 420 083 292 Governer no.

Cust. part No. : 0240748202

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm : 4.55 : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance mm : +- 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : **←** 0.50

Check

: + 0.75tolerance °NW

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 13.60 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 123.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

	1
Check tolerance	†
cm3/1000s. : 8.0	+ Rated speed rpm : 1690
	+ guide sleeve
Rated speed rpm : 300	† travel mm : 13.50
·	† Tolerance mm : + 0.50
Rack travel in mm: 3.90	1
Tolerance mm : + 0.10	
Del. quantity	↓ GUIDE SLEEVE POSITION
cm3/1000 strokes : 12.0	T GOIDE SELECTE FOSTITON
	T Dated aread was a 1500
Tolerance	+ Rated speed rpm : 1500
cm3/1000 strokes : +- 2.0	10.00
Check tolerance	Rack travel in mm: 10.00
cm3/1000s. : + 4.5	+ Tolerance mm : + 2.00
Spreed	+
Tolerance	
cm3/1000 strokes : 2.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	+
cm3/1000s. : 4.0	+ Rated speed rpm : 1300
	Aneroid pressure
	+ hPa : 1200
(B) SETTING OF INJECTION PUMP	Del. quantity
	+ cm3/1000 strokes : 123.0
WITH GOVERNOR	
	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVEL	+ Check tolerance
	+ cm3/1000s. : $+$ 4.0
Rated speed rpm : 300	+ Spreed
guide sleeve	† Tolerance
travel mm : 0.91	+ cm3/1000 strokes : 5.0
Tolerance mm : + 0.25	+ Check tolerance
	+ cm3/1000s. : 8.0
Rated speed rpm : 1354	
guide sleeve	\perp
travel mm : 7.77	<u> </u>
	CONTROL LEVED
Tolerance mm : + 0.25	+ CONTROL LEVER
	.
Rated speed rpm : 1150	+ control lever
guide sleeve	+ position degree : 116.0
travel mm : 5.95	tolerance degree : + 4.0
Tolerance mm : + 0.25	+
	+ RATED SPEED
Rated speed rpm : 629	+
guide sleeve	† rack travel mm : 12.60
travel mm : 3.15	+ Rated speed rpm : 1345
Tolerance mm : + 0.25	+ Tolerance 1/min : + 5
10661 (1106 1141)	
Reted speed rpm : 679	rack travel mm : 4.00
the second secon	
guide sleeve	
travel mm : 3.45	Tolerance 1/min : + 15
Tolerance mm : + 0.25	†
	+ rack travel mm : 0.50
Rated speed rpm : 820	+ Tolerance mm : + 0.50
guide sleeve	+ Rated speed rpm : 1550
travel mm : 4.09	+
Tolerance mm : + 0.25	+
	<u> </u>
Rated speed rpm : 1596	+ LOW IDLE
guide sleeve	
travel mm : 12.00	1
	1
Tolerance mm : + 0.25	T

control lever position degree tolerance degree	: 71.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.90 : ← 0.10
Rated speed rpm	: 200
CRT mm min.	: > 4.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 13.60 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.60 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.60 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 600 : 2.00 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 350 : 0.50 : + 0.10
START CUT-OUT	
Rated speed rpm	: > 100

A1 . 1	
Check speed 1/min	: > 80
Check	. > 00
speed 1/min	: < 220
· · · · · · · · · · · · · · · · · · ·	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1200
Rated speed rpm	: 600
Del. quantity	424.0
cm3/1000 strokes Tolerance	: 121.0
cm3/1000 strokes	: 2.0
Check tolerance	213
cm3/1000s.	: ← 5.0
Spreed	
Tolerance cm3/1000 strokes	: 6.0
Check tolerance	. 0.0
cm3/1000s.	: 9.0
	· -
Aneroid pressure	
hPa	: - : 500
Rated speed rpm Del. quantity	• 500
cm3/1000 strokes	: 67.0
Tolerance	
cm3/1000 strokes	: + 1.0
Check tolerance	: +- 3.0
cm3/1000s.	: 3.0
BREAKAWAY	
Rack travel in mm	
Rated speed rpm	: 1345 : +- 5
Tolerance 1/min	: -
STARTING FUEL DEL	TVERY
DIANTING TOEL DEL.	± ₹ ₩.1\ (
Rated speed rpm	: 100
Del. quantity	450.4
cm3/1000 strokes	: 150.0
Tolerance cm3/1000 strokes	: + 5.0
Check tolerance	
cm3/1000s.	: +- 8.0
LOW IDLE	
Rated speed rpm	: 300
rack travel mm	: 3.90

Tolerance mm	: +	0.10
Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.04.95 Edition Test oil : ISO 4113

Combination No. : 0 403 244 034

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

: 0 413 204 018 EP type number

Governor

Governer design. : RQV300...1300MW132

: -3

Governer no. : 0 420 083 296

Cust. part No. : 0240740702

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA

Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.50

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : **←** 0.50

Check

tolerance "NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.15 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : ← 3.0

Spreed

Tolerance

Check tolerance	† Part 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
cm3/1000s. : 7.0	+ Rated speed rpm : 1690 + guide sleeve
Rated speed rpm : 300	+ travel mm : 13.50
	+ Tolerance mm : +- 0.50
Rack travel in mm: 4.00	†
Tolerance mm : + 0.10 Del. quantity	+ GUIDE SLEEVE POSITION
cm3/1000 strokes : 12.0	T GOIDE SEEEAE LOSITION
Tolerance	Rated speed rpm : 1500
cm3/1000 strokes : + 2.0	†
Check tolerance cm3/1000s. : +- 4.5	+ Rack travel in mm : 10.00 + Tolerance mm : + 2.00
Spreed	Toterance limit : - 2.00
Tolerance	1
cm3/1000 strokes : 2.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	Patral available 4700
cm3/1000s. : 4.0	+ Rated speed rpm : 1300 + Aneroid pressure
	+ hPa : 700
(B) SETTING OF INJECTION PUMP	Del. quantity
WITH GOVERNOR	+ cm3/1000 strokes : 87.0
	Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : + 1.0 Check tolerance
GOTOF OFFICE HUART	cm3/1000s. : + 3.0
Rated speed rpm : 300	Spreed
guide sleeve	Tolerance
travel mm : 0.91 Tolerance mm : + 0.25	+ cm3/1000 strokes : 4.5 + Check tolerance
Toterance man : - 0.25	+ cm3/1000s. : 7.0
Rated speed rpm : 1345	1.5
guide sleeve	+
travel mm : 7.64	CONTROL I FUED
Tolerance mm : +- 0.25	CONTROL LEVER
Rated speed rpm : 1140	control lever
guide sleeve	position degree : 112.0
travel mm : 5.88	tolerance degree : + 4.0
Tolerance mm : + 0.25	RATED SPEED
Rated speed rpm : 629	T RATED SPEED
guide sleeve	rack travel mm : 10.10
travel mm : 3.15	Rated speed rpm : 1345
Tolerance mm : + 0.25	Tolerance 1/min : + 5
Rated speed rpm : 679	† + rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1435
travel mm : 3.53	Tolerance 1/min : + 15
Tolerance mm : + 0.25	0.50
Rated speed rpm : 800	rack travel mm : 0.50 - Tolerance mm : + 0.50
Rated speed rpm : 800 guide sleeve -	Rated speed rpm : 1550
travel mm : 4.00	Hates opens i piii
Tolerance mm : +- 0.25 -	+
Detail aread one a 4500	LOUTINE
Rated speed rpm : 1596 - guide sleeve -	LOW IDLE
travel mm : 12.00	
Tolerance mm : + 0.25	}

		→
control lever position degree tolerance degree	: 70.0 : +- 4.0	FUEL DELIVERY CHARACTERISTICS
Testing:		+ Aneroid pressure + hPa : 700 + Rated speed rpm : 750
Rated speed rpm rack travel mm Tolerance mm	: 4.00	Del. quantity cm3/1000 strokes : 79.0 Tolerance
Rated speed rpm	: 200	cm3/1000 strokes : + 1.5 Check tolerance
CRT mm min.	: > 4.50	cm3/1000s. : + 4.0 Spreed Tolerance
TORQUE CONTROL		
Rated speed rpm rack travel mm	: 1300 : 11.15	cm3/1000S. : 9.0 Aneroid pressure
Tolerance mm	: +- 0.05	hPa : - Rated speed rpm : 500
Rated speed rpm rack travel mm Tolerance mm	: 11.15	Del. quantity cm3/1000 strokes : 67.0 Tolerance
Total alice lish		cm3/1000 strokes : + 1.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000s. : +- 3.0
SETTING		BREAKAWAY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 11.15 : +- 0.05	Rack travel in mm: 10.10 Rated speed rpm: 1345 Tolerance 1/min: + 5
MEASUREMENT		STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm	: -	†
Tolerance mm	: 500 : +- 0.10	+ Rated speed rpm : 100 + Del. quantity - rm3/1000 strokes : 125 0
Tolerance mm	: +- 0.10	Del. quantity cm3/1000 strokes : 125.0 Tolerance
Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: + 0.10 : 500 : 230 : 0.20	Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: + 0.10 : 500 : 230 : 0.20	Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00
Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm	: + 0.10 : 500 : 230 : 0.20 : + 0.10	Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300

Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 2.0
Check tolerance
cm3/1000s. : 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.04.95 : ISO 4113 Test oil

Combination No. : 0 403 244 035

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

EP type number : 0 413 204 018

Governor

Governer design. : RQV300...1300MW132

: -3

: 0 420 083 296 Governer no.

Cust. part No. : 0240740802

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

Tolerance : + 0.50

Check

tolerance *NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.15 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed Tolerance

Check tolerance	1	
cm3/1000s.	: 7.0 I	Rated speed rpm : 1690
CID TOGOS.	· '	guide sleeve
Rated speed rpm	· 300 I	travel mm : 13.50
nacea speca i piir	1	Tolerance mm : +- 0.50
Rack travel in mm	1: 4.00	1 Occi di loc nan
Tolerance mm		
Del. quantity	1	GUIDE SLEEVE POSITION
cm3/1000 strokes	: 12.0	
Tolerance	-	Rated speed rpm : 1500
cm3/1000 strokes	: +- 2.0	·
Check tolerance	+	Rack travel in mm : 10.00
cm3/1000\$.	: ← 4.5	Tolerance mm : +- 2.00
Spreed	+	
Tolerance	+	
cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		D. J. J
cm3/1000s.	: 4.0	Rated speed rpm : 1300
	T	Aneroid pressure hPa : 700
(B) SETTING OF IN	IECTION DUMP	
WITH GOVERNOR	JECTION FOME	Del. quantity cm3/1000 strokes : 87.0
WITH GOVERNOR	I	Tolerance
		cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVE	FI 🕹	Check tolerance
		cm3/1000s. : + 3.0
Rated speed rpm	: 300	Spreed
guide sleeve	1	Tolerance
travel mm	: 0.91	cm3/1000 strokes : 4.5
Tolerance mm	: +- 0.25	Check tolerance
	+	cm3/1000s. : 7.0
Rated speed rpm	: 1345	
guide sleeve	†	
travel mm	: 7.64	CONTROL LEUED
Tolerance mm	: + 0.25 +	CONTROL LEVER
Datad amand nam	: 1140	control lever
Rated speed rpm guide sleeve	· 1140	position degree : 112.0
travel mm	: 5.88	tolerance degree : + 4.0
Tolerance mm	: ← 0.25	totorunde degree
		RATED SPEED
Rated speed rpm	: 629	
guide sleeve	+	rack travel mm : 10.10
travel mm	: 3.15	Rated speed rpm : 1345
Tolerance mm	: + 0.25 +	Tolerance 1/min : + 5
	+	
Rated speed rpm	: 679 +	rack travel mm : 4.00
guide sleeve	+	Rated speed rpm : 1435
travel mm	3.53	Tolerance 1/min : + 15
Tolerance mm	: + 0.25	most through the a C EO
Batad speed now	: 800	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve	. 500	Rated speed rpm : 1550
travel mm	: 4.00	nacea speed i pin 1 1990
Tolerance mm	: + 0.25	
. Jeor Gripe Han	1	
Rated speed rpm	: 1596	LOW IDLE
guide sleeve	1	
travel mm	: 12.00	
Tolerance mm	: ← 0.25 +	
	·	

		1
control lever position degree tolerance degree		FUEL DELIVERY CHARACTERISTICS Aneroid pressure
Testing:		hPa : 700 Rated speed rpm : 750
Rated speed rpm rack travel mm Tolerance mm	: 4.00	Del. quantity cm3/1000 strokes : 79.0 Tolerance
Rated speed rpm	: 200	cm3/1000 strokes : + 1.5 Check tolerance
CRT mm min.	; > 4.50	+ cm3/1000s. : + 4.0 + Spreed + Tolerance
TORQUE CONTROL		cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 11.15 : + 0.05 : 750 : 11.15	cm3/1000s. : 9.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 67.0 Tolerance cm3/1000 strokes : + 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000s. : + 3.0
		BREAKAWAY
SETTING		
SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm		Rack travel in mm : 10.10 Rated speed rpm : 1345 Tolerance 1/min : + 5
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 11.15	Rack travel in mm: 10.10 Rated speed rpm: 1345
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm	: 700 : 11.15 : + 0.05 : - 500 : + 0.10	Rack travel in mm: 10.10 Rated speed rpm: 1345 Tolerance 1/min: + 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity cm3/1000 strokes: 125.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 700 : 11.15 : + 0.05	Rack travel in mm: 10.10 Rated speed rpm: 1345 Tolerance 1/min: + 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 700 : 11.15 : + 0.05 : + 0.05 : 500 : + 0.10 : 500 : 230 : 0.20	Rack travel in mm: 10.10 Rated speed rpm: 1345 Tolerance 1/min: + 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity cm3/1000 strokes: 125.0 Tolerance cm3/1000 strokes: + 5.0 Check tolerance cm3/1000s. : + 8.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Rated speed rpm	: 700 : 11.15 : + 0.05 : + 0.05 : 500 : + 0.10 : 500 : 230 : 0.20	Rack travel in mm : 10.10 Rated speed rpm : 1345 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000S. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00
Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 11.15 : + 0.05 : + 0.05 : 500 : + 0.10 : 500 : 230 : 0.20 : + 0.10	Rack travel in mm : 10.10 Rated speed rpm : 1345 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300

Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s.	:	4.0
	•	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.04.95 Test oil : ISO 4113

Combination No. : 0 403 244 036

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

EP type number : 0 413 204 018

Governor

Governer design. : RQV300...1300MW132

: -5

Governer no. : 0 420 083 308

Cust. part No. : 0240740902

Customer—spec. information Customer : MB-NFZ Motor : OM364LA

Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.15

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

Check tolerance	+	
cm3/1000s.	: 7.0	Rated speed rpm : 1690 guide sleeve
Rated speed rpm	: 300	travel mm : 13.50 Tolerance mm : +- 0.50
Rack travel in mm	: 4.00	roter drice has
Tolerance mm	: +- 0.10 +	
Del. quantity	+	GUIDE SLEEVE POSITION
cm3/1000 strokes Tolerance	: 12.0	Rated speed rpm : 1500
cm3/1000 strokes	: + 2.0	nated speed (piii : 1500
Check tolerance	+	Rack travel in mm: 10.00
cm3/1000s.	: +- 4.5	Tolerance mm : $+$ 2.00
Spreed Tolerance	İ	
cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	+	
cm3/1000s.	: 4.0	Rated speed rpm : 1300
	Ī	Aneroid pressure hPa : 700
(B) SETTING OF IN	JECTION PUMP	Del. quantity
WITH GOVERNOR	+	cm3/1000 strokes : 87.0
	†	Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVE	FI I	Check tolerance
	+	cm3/1000s. : +- 3.0
Rated speed rpm	: 300 +	Spreed
guide sleeve travel mm	: 0.91	Tolerance cm3/1000 strokes : 4.5
Tolerance mm	÷ + 0.25	Check tolerance
1001 41100 1111	+	cm3/1000s. : 7.0
Rated speed rpm	: 1353	
guide sleeve travel mn	: 7.76	
Tolerance mm	: + 0.25	CONTROL LEVER
	+	
Rated speed rpm	: 1140	control lever
guide sleeve travel mm	: 5.88	position degree : 112.0 tolerance degree : + 4.0
Tolerance mm	: + 0.25	1000 400 400 100
	+	RATED SPEED
Rated speed rpm guide sleeve	: 629	rack travel mm : 10.10
travel mm	: 3.15 I	Rated speed rpm : 1345
Tolerance mm	: + 0.25 +	Tolerance 1/min : +- 5
9-4-1 d	. (70	made to continue and 100
Rated speed rpm guide sleeve	: 679	rack travel mm : 4.00 Rated speed rpm : 1435
travel mm	: 3.53	Tolerance 1/min : + 15
Tolerance mm	: + 0.25	
Datad anord ann	: 800	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve	. 000	Tolerance mm : + 0.50 Rated speed rpm : 1550
travel mm	: 4.00	
Tolerance mm	: +- 0.25	
Rated speed rpm	: 1596	LOW IDLE
guide sleeve	1	FOR INTE
travel mm	: 12.00	
Tolerance mm	: + 0.25 +	

		†
control lever position degree tolerance degree		FUEL DELIVERY CHARACTERISTICS
Testing:		Aneroid pressure hPa : 700 Rated speed rpm : 750
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.00 : + 0.10	Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 79.0 Tolerance
Rated speed rpm		cm3/1000 strokes : + 1.5
CRT mm min.		cm3/1000s. : +- 4.0 + Spreed
		Tolerance cm3/1000 strokes : 6.0
TORQUE CONTROL		Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 11.15 : + 0.05	Aneroid pressure hPa : - Rated speed rpm : 500
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.15 : ← 0.10	Del. quantity cm3/1000 strokes : 67.0 Tolerance cm3/1000 strokes : + 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000s. : + 3.0
SETTING		BREAKAWAY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700	Rack travel in mm: 10.10 Rated speed rpm: 1345 Tolerance 1/min: + 5
MEASUREMENT		STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm Tolerance mm	500 + 0.10	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 125.0
Rated speed rpm	: 500	Tolerance - cm3/1000 strokes : + 5.0
Pressure hPa rack travel mm Tolerance mm	: 230 : 0.20 : + 0.10	Check tolerance cm3/1000s. : + 8.0
START CUT-OUT		
Rated speed rpm Rated speed rpm	: > 100 : < 200	LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00
Check speed 1/min Check speed 1/min	: > 80 : < 220	Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 12.0
-1		Ŧ.

Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance		
cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.07.95 Test oil : ISO 4113

Combination No. : 0 403 244 036A

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

EP type number : 0 413 204 018

Governor

Governer design. : RQV300...1300MW132

: -5

Governer no. : 0 420 083 308

Cust. part No. : 0240740902

Customer—spec. information Customer : MB-NFZ Motor : OM364LA Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : + 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1270

Rack travel in mm : 11.15
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

Chaol, dalamana	•	
Check tolerance	7.0	Dool topical in my a 10 00
cm3/1000s. :	7.0	Rack travel in mm: 10.00
Dated aread man	700	Tolerance mm : +- 2.00
Rated speed rpm :	300 +	
Rack travel in mm :	4.00	FULL LOAD DELIVERY AT FULL LOAD STOP
	0.10	FOLL LUAD DELIVERY AT FULL LUAD STOP
	7	Rated speed rpm : 1270
Del. quantity cm3/1000 strokes :	12.0 I	Rated speed rpm : 1270 Aneroid pressure
Tolerance	72.0	hPa : 700
cm3/1000 strokes : +-	2.0	
Check tolerance	2.0	Del. quantity cm3/1000 strokes : 87.0
cm3/1000s. : +-	4.5	
	4.3	Tolerance cm3/1000 strokes : +- 1.0
Spreed Tolerance	Ť	Check tolerance
cm3/1000 strokes :	2.0	cm3/1000s. : + 3.0
Check tolerance	2.0	
cm3/1000s. :	4.0	Spreed Tolerance
CHD/ 10005.	4.0	cm3/1000 strokes : 4.5
	Ţ	Check tolerance
(B) SETTING OF INJECTION	ON DIME	cm3/1000s. : 7.0
WITH GOVERNOR	ON FOIRE	CIID7 10005. : 7.U
WITH GOVERNOR	Ť	
	<u> </u>	
GUIDE SLEEVE TRAVEL	I	CONTROL LEVER
GOIDE SEEFAE INHAFE	I	CONTROL LEVER
Rated speed rpm :	300 1	control lever
guide sleeve		position degree : 111.0
travel mm :	0.91	tolerance degree : + 4.0
	0.20	orei and degree . The
Total arrow with	1	RATED SPEED
Rated speed rpm :	1353	WHEN OF EED
guide sleeve		rack travel mm : 10.10
travel mm :	7.02	Rated speed rpm : 1310
	0.15	Tolerance 1/min : +- 10
, 5 (5) (3) (5)	1	
Rated speed rpm : '	1090	rack travel mm : 4.00
guide sleeve	1	Rated speed rpm : 1445
travel mm :	5.21	Tolerance 1/min : + 5
	0.25	
	+	rack travel mm : 0.50
Rated speed rpm :	790	Tolerance mm : +- 0.50
guide sleeve	+	Rated speed rpm : 1550
travel mm :	3.98	
Tolerance mm : ←	0.25	
	+	
Rated speed rpm : 1	1759 +	LOW IDLE
guide sleeve	+	
	12.00 +	
Tolerance mm : +-	0.25	control lever
	+	position degree : 74.0
Rated speed rpm : 1	1870 +	tolerance degree : +- 4.0
guide sleeve	+	
travel mm :	13.50	Testing:
Tolerance mm : +	0.50	
	+	Rated speed rpm : 300
		rack travel mm : 4.00
GUIDE SLEEVE POSITION	+	Tolerance mm : +- 0.10
	+	
Rated speed rpm : 1	1500 +	Rated speed rpm : 200

CRT mm min. :> 4.70	Check tolerance cm3/1000s. : + 4.0 Spreed
TORQUE CONTROL	Tolerance cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm : 1270 - rack travel mm : 11.15	cm3/1000s. : 9.0
Tolerance mm : +- 0.05	Aneroid pressure hPa : -
Rated speed rpm : 750 - rack travel mm : 11.15 - Tolerance mm : + 0.10 -	Rated speed rpm : 500 Del. quantity
Tolerance mm : + 0.10	cm3/1000 strokes : 67.0 Tolerance
ANEROID/ALTITUDE	cm3/1000 strokes : + 1.0 Check tolerance
COMPENSATOR TEST	cm3/1000s. : + 3.0
SETTING -	BREAKAWAY
Rated speed rpm : 500 - Pressure hPa : 700 -	Rack travel in mm : 10.10
rack travel mm : 11.15 - Tolerance mm : + 0.05 -	Rated speed rpm : 1310 Tolerance 1/min : + 10
•	f loterance limin : +- lu
MEASUREMENT -	
Pressure hPa :	STARTING FUEL DELIVERY
Tolerance mm : + 0.10	Rated speed rpm : 100 Del. quantity
Rated speed rpm : 500	cm3/1000 strokes : 125.0
Pressure hPa : 230	- Tolerance - cm3/1000 strokes : +- 5.0
rack travel mm : 0.20 - Tolerance mm : + 0.10 -	- Check tolerance - cm3/1000s. : +- 8.0
Toterance may	- 1107 10000.
START CUT-OUT	
Rated speed rpm : > 100 - Rated speed rpm : < 200	- LOW IDLE
	- Rated speed rpm : 300
Check	- rack travel mm : 4.00 - Tolerance mm : +- 0.10
speed 1/min :> 80 Check	Tolerance mm : + 0.10 Del. quantity
speed 1/min : > 80	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance
speed 1/min : > 80 Check speed 1/min : < 220	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0
speed 1/min :> 80 Check	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5
speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS Aneroid pressure	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed
speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 700	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5
speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 700 Rated speed rpm : 750 Del. quantity	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance
speed 1/min : > 80 Check speed 1/min : < 220 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 700 Rated speed rpm : 750	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 2.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.04.95 Test oil : ISO 4113

Combination No. : 0 403 244 038

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

: 0 413 204 018 EP type number

Governor

Governer design. : RQV300...1200MW132

: -7

: 0 420 083 312 Governer no.

: 0250748302 Cust. part No.

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 11.15 : **←** 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : **←** 3.0

Spreed

Tolerance

Check tolerance	I.	
cm3/1000s.	: 7.0	Rack travel in mm : 11.00
CHE7 100001		Tolerance mm : +- 2.00
Rated speed rpm	: 300	1000141100 11111
	+	
Rack travel in mm): 4.00 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm	: + 0.10 +	
Del. quantity	+	Rated speed rpm : 1200
cm3/1000 strokes	: 12.0	Aneroid pressure
Tolerance		hPa : 700
cm3/1000 strokes Check tolerance	: + 2.0	Del. quantity cm3/1000 strokes : 87.0
cm3/1000s.	: +- 4.5	Tolerance
Spreed	· + 4.5	cm3/1000 strokes : +- 1.0
Tolerance	I	Check tolerance
cm3/1000 strokes	: 2.0	cm3/1000s. : + 3.0
Check tolerance	1	Spreed
cm3/1000s.	: 4.0	Tolerance
	+	cm3/1000 strokes : 4.5
	+	Check tolerance
(B) SETTING OF IN	JECTION PUMP +	cm3/1000s. : 7.0
WITH GÖVERNOR	+	
	†	
GUIDE SLEEVE TRAV	es T	CONTROL LEVER
GOIDE SCEENE INAV	<u> </u>	CONTROL LEVER
Rated speed rpm	: 300	control lever
guide sleeve	. 300	position degree : 114.0
travel mm	: 0.92	tolerance degree : +- 4.0
Tolerance mm	: + 0.25	The second secon
	+	RATED SPEED
Rated speed rpm	: 1255	
guide sleeve	+	rack travel mm : 10.15
travel mm	: 7.93 +	Rated speed rpm : 1245
Tolerance mm	: + 0.25	Tolerance 1/min : + 5
Dated aread non	: 671	rack travel mm : 4.00
Rated speed rpm guide sleeve	: 671	Rated speed rpm : 1355
travel mm	: 3.58 I	Tolerance 1/min : + 15
Tolerance mm	÷ 0.25	Total drice Tribiti
	1	rack travel mm : 0.50
Rated speed rpm	: 721	Tolerance mm : $+$ 0.50
guide sleeve	+	Rated speed rpm : 1450
travel mm	: 4.06	
Tolerance mm	: + 0.25	
	 	LOUITNER
Rated speed rpm	: 970 +	LOW IDLE
guide sleeve	: 5.51	
travel mm Tolerance mm	÷ + 0.25	control lever
roterance mer	I	position degree : 72.0
Rated speed rpm	: 1690	tolerance degree : +- 4.0
guide sleeve	1	TTO
travel mm	: 13.50	Testing:
Tolerance mm	: + 0.50	č
	+	Rated speed rpm : 300
		rack travel mm : 4.00
GUIDE SLEEVE POSIT	rion +	Tolerance mm : +- 0.10
	1/50	Dated and an and an an an an an an an an an an an an an
Rated speed rpm	: 1450 +	Rated speed rpm : 200

CRT mm min. :> 4.50	+ Check tolerance - cm3/1000s. : + 4.0 - Spreed
TORQUE CONTROL	Tolerance cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm : 1200 rack travel mm : 11.15	cm3/1000s. : 9.0
Tolerance mm : + 0.05	Aneroid pressure hPa : -
Rated speed rpm : 750 rack travel mm : 11.15 Tolerance mm : + 0.10	Rated speed rpm : 500 Del. quantity
Tolerance mm : + 0.10	cm3/1000 strokes : 67.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	+ cm3/1000 strokes : + 1.0 + Check tolerance + cm3/1000s. : + 3.0
CONTRIBUTION TEST	
SETTING	BREAKAWAY
Rated speed rpm : 500 Pressure hPa : 700 rack travel mm : 11.15	+ Rack travel in mm : 10.15
Pressure hPa : 700 rack travel mm : 11.15 Tolerance mm : +- 0.05	Rated speed rpm : 1245
Tolerance mm : +- 0.05	Tolerance 1/min : +- 5
MEASUREMENT	
Pressure hPa : -	STARTING FUEL DELIVERY
Rated speed rpm : 500 Tolerance mm : + 0.10	+ Rated speed rpm : 100
toterance isin . F- 0.10	+ Del. quantity
Rated speed rpm : 500	cm3/1000 strokes : 125.0
Pressure hPa : 230	+ Tolerance + cm3/1000 strokes : + 5.0
rack travel mm : 0.20	Check tolerance
Tolerance mm : + 0.10	+ cm3/1000s. : +- 8.0
START CUT-OUT	‡
Rated speed rpm : > 100	LOW IDLE
Rated speed rpm : < 200	Patrad annual rest
Check	+ Rated speed rpm : 300 + rack travel mm : 4.00
speed 1/min : > 80	+ Tolerance mm : + 0.10
Check	Del. quantity
speed 1/min : < 220	- cm3/1000 strokes : 12.0 - Tolerance - cm3/1000 strokes : + 2.0
FUEL DELIVERY CHARACTERISTICS	Check tolerance + cm3/1000s. : + 4.5
Aneroid pressure	Spreed 4.3
hPa : 700	+ Tolerance
Rated speed rpm : 750 Del. quantity	+ cm3/1000 strokes : 2.0 + Check tolerance
cm3/1000 strokes : 79.0 Tolerance	cm3/1000s. : 4.0
cm3/1000 strokes : + 1.5	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.06.95 Edition Test oil : ISO 4113

Combination No. : 0 403 244 040

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

EP type number : 0 413 204 017

Governor

Governer design. : RQV300...1200MW132

: -8

: 0 420 083 313 Governer no.

Cust. part No. : 0250748502

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 103.0

TEST BENCH REQUIREMENTS

: 3.1 Inlet line

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.00 Tolerance m : \leftarrow 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance $: \leftarrow 0.50$

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 13.90 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 126.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.D

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s. Rated speed rpm	: 8.0 : 300	Rack travel in mm : 10.00 Tolerance mm : +- 2.00
Rack travel in mo		FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes	-	Rated speed rpm : 1200 Aneroid pressure
Tolerance cm3/1000 strokes	•	hPa : 1400 Del. quantity
Check tolerance cm3/1000s.	: +- 4.5	cm3/1000 strokes : 126.0
Spreed Tolerance		cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes Check tolerance	: 2.0	cm3/1000s. : +- 4.0
cm3/1000s.	: 4.0	Tolerance : 5.0
(B) SETTING OF IN	- NJECTION PUMP -	Check tolerance : 8.0
WITH GOVERNOR	- -	 -
GUIDE SLEEVE TRAN	/EL -	CONTROL LEVER
Rated speed rpm guide sleeve	: 300	control lever position degree : 115.0
travel mm Tolerance mm	: 0.92 : + 0.25	tolerance degree : +- 4.0
Rated speed rpm	: 1255	RATED SPEED
guide sleeve travel mm	: 7.93	rack travel mm : 12.90 Rated speed rpm : 1245
Tolerance mm	: + 0.25	Rated speed rpm : 1245 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 671	rack travel mm : 4.00 Rated speed rpm : 1405
travel mm Tolerance mm	: 3.58 - : +- 0.25 -	Tolerance 1/min : + 15
Rated speed rpm	: 721	rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve	4	- Rated speed rpm : 1500
travel mm Tolerance mm	: 4.06 : + 0.25	
Rated speed rpm guide sleeve	: 970	- LOW IDLE
travel mm	: 5.51	
Tolerance mm	: +- 0.25	- control lever - position degree : 75.0
Rated speed rpm guide sleeve	: 1690	tolerance degree : + 4.0
travel mm	: 13.50	Testing:
Tolerance mm	: + 0.50	Rated speed rpm : 300
GUIDE SLEEVE POSI	TION	rack travel mm : 3.90 Tolerance mm : + 0.10
Rated speed rpm	: 1450	Rated speed rpm : 200

CRT mm min.	: > 4.50	+ Del. quantity + cm3/1000 strokes : 126.0 + Tolerance
TORQUE CONTROL		
Rated speed rpm rack travel mm		cm3/1000s. : + 5.0 Spreed + Tolerance
Tolerance mm		cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.90 : + 0.10	cm3/1000s. : 9.0 Aneroid pressure
		hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity + cm3/1000 strokes : 67.0
SETTING		Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm	: 500	cm3/1000s. : + 3.0
Pressure hPa rack travel mm Tolerance mm	: 1400	BREAKAWAY
MEASUREMENT		Rack travel in mm: 12.90
Pressure hPa Rated speed rpm Tolerance mm		Rated speed rpm : 1245 Tolerance 1/min : + 5
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa rack travel mm	: 2.00	Rated speed rpm : 100 Del. quantity
Tolerance mm		cm3/1000 strokes : 150.0 Tolerance
Pressure hPa rack travel mm Tolerance mm	: 350 : 0.50 : + 0.10	+ cm3/1000 strokes : + 5.0 + Check tolerance + cm3/1000s. : + 8.0
START CUT-OUT		‡
Rated speed rpm Rated speed rpm		LOW IDLE
Check speed 1/min	; > 80	Rated speed rpm : 300 rack travel mm : 3.90 Tolerance mm : + 0.20
Check speed 1/min	: < 220	Del. quantity cm3/1000 strokes : 12.0
		Tolerance cm3/1000 strokes : + 2.0
FUEL DELIVERY CHA	RACTERISTICS	+ Check tolerance + cm3/1000s. : +- 4.5
Aneroid pressure hPa	: 1400	Spreed Tolerance
Rated speed rpm	: 600	+ cm3/1000 strokes : 2.0

cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.06.95 Test oil : 180 4113

Combination No. : 0 403 244 041

Injection pump

Pump designation : PES4MW100/720RS1519

: -2

EP type number : 0 413 204 017

Governor

Governer design. : RQV300...1200MW132

: -8

Governer no. : 0 420 083 313

Cust. part No. : 0250748602

Customer—spec. information Customer : MB-NFZ Motor : OM364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : +- 0.05
Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 13.90 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 126.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance +	
cm3/1000s. : 8.0 +	Rack travel in mm : 10.00
+	Tolerance mm : +- 2.00
Rated speed rpm : 300 +	
+	
Rack travel in mm: 3.90 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.20 +	
Del. quantity +	Rated speed rpm : 1200
cm3/1000 strokes : 12.0 +	Aneroid pressure
Tolerance +	hPa : 1400
cm3/1000 strokes : \leftarrow 2.0 $+$	Del. quantity
Check tolerance +	cm3/1000 strokes : 126.0
cm3/1000s. : +- 4.5	Tolerance
Spreed	cm3/1000 strokes : + 1.0
Tolerance +	Check tolerance
cm3/1000 strokes : 2.0	cm3/1000s. : + 4.0
Check tolerance	Spreed
cm3/1000s. : 4.0	Tolerance
1	cm3/1000 strokes : 5.0
1	Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : 8.0
WITH GOVERNOR +	
AZIII GOSEINION	
GUIDE SLEEVE TRAVEL	CONTROL LEVER
The state of the s	4411144 22451
Rated speed rpm : 300	control lever
guide sleeve	position degree : 115.0
travel mm : 0.92	tolerance degree : + 4.0
Tolerance mm : + 0.25 +	total alloc degli ec. 1 . 410
Total and the limit	RATED SPEED
Rated speed rpm : 1255	NATED OF ELD
guide sleeve	rack travel mm : 12.90
travel mm : 7.93	Rated speed rpm : 1245
Tolerance mm : + 0.25	Tolerance 1/min : +- 5
Toterance min : += 0.25	roterance minima : += 3
Rated speed rpm : 671	rack travel mm : 4.00
The second secon	
guide sleeve + travel mm : 3.58 +	Rated speed rpm : 1405 Tolerance 1/min : +- 15
	Toterance (7mm) : +- 15
Tolerance mm : + 0.25	mode tomorel mm
724	rack travel mm : 0.50
Rated speed rpm : 721	Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1500
travel mm : 4.06	
Tolerance mm : + 0.25	
8-4-4	LOU TRUE
Rated speed rpm : 970	LOW IDLE
guide sleeve	
travel mm : 5.51 +	
Tolerance mm : + 0.25 +	control lever
+	position degree : 75.0
Rated speed rpm : 1690 +	tolerance degree : + 4.8
guide steeve	
travel mm : 13.50 +	Testing:
Tolerance mm : + 0.50 +	
+	Rated speed rpm : 300
	rack travel mm : 3.90
GUIDE SLEEVE POSITION +	Tolerance mm : + 0.10
+ · · · · · · · · · · · · · · · · · · ·	
Rated speed rpm : 1450 +	Rated speed rpm : 200
•	

CRT mm min. :	> 4.50	Del. quantity cm3/1000 strokes : 126.0 Tolerance
TORQUE CONTROL		cm3/1000 strokes : +- 2.0 Check tolerance
Rated speed rpm :	1200	cm3/1000s. : +- 5.0 Spreed
rack travel mm : Tolerance mm :	13.90 +- 0.05	Tolerance cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm : rack travel mm : Tolerance mm :	600 13.90	cm3/1000s. : 9.0
Tolerance mm :	+ 0.10	Aneroid pressure hPa : —
ANEROID/ALTITUDE COMPENSATOR TEST	+	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 67.0
COMPENSATOR TEST	Ŧ	Tolerance cm3/1000 strokes : + 1.0
SETTING	‡	Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm : Pressure hPa :	500 1400	
rack travel mm : Tolerance mm :	13.90	BREAKAWAY
MEASUREMENT	<u>‡</u>	Rack travel in mm : 12.90 Rated speed rpm : 1245
Pressure hPa : Rated speed rpm : Tolerance mm :	500 + 0.10	Tolerance 1/min : +- 5
Rated speed rpm :	+	STARTING FUEL DELIVERY
Pressure hPa : rack travel mm :	600	Rated speed rpm : 100 Del. quantity
Tolerance mm :	+ 0.10	cm3/1000 strokes : 150.0 Tolerance
Pressure hPa : rack travel mm :	350 0.50	cm3/1000 strokes : + 5.0 Check tolerance
	+ 0.10	cm3/1000s. : + 8.0
START CUT-OUT	<u> </u>	
	> 100 < 200	LOW IDLE
	7	Rated speed rpm : 300
Check speed 1/min :	> 80 +	rack travel mm : 3.90 Tolerance mm : + 0.20
Check	- SS I	Del. quantity
	< 220	cm3/1000 strokes : 12.0 Tolerance
FUEL DELIVERY CHARAC	CTERISTICS	cm3/1000 strokes : + 2.0 Check tolerance
Aneroid pressure	‡	cm3/1000s. : +- 4.5 Spreed
hPa : Rated speed rpm :	1400 600 +	Tolerance cm3/1000 strokes : 2.0
varen sheen i biii :	I	51107 1000 361 0A63 . L.U

cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.06.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 244 045

Injection pump

Pump designation : PES4MW100/720RS1524 EP type number : 0 413 204 021

Governor

Governer design. : RQV300...1300MW132

: -12

Governer no. : 0 420 083 329

Cust. part No. : 0240740902

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA : 77.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar 1.5

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 4.55 Tolerance mm : + 0.05Check

tolerance mm : + 0.10

Rack travel in mm: 21.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.00 : ← 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes :

89.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. 3.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. 7.0

	guide sleeve
Rated speed rpm : 300	travel mm : 13.50 Tolerance mm : + 0.50
Rack travel in mm : 4.40	F roterance mm : 0.50
Tolerance mm : +- 0.20	
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 12.0	<u> </u>
Tolerance	Rated speed rpm : 1350
cm3/1000 strokes : +- 2.0 Check tolerance	r - Rack travel in mm : 10.00
cm3/1000s. : +- 4.5	Tolerance mm : + 2.00
Spreed	- 1000 11111
Tolerance -	
cm3/1000 strokes : 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	Patrid annual annual 4700
cm3/1000s. : 4.0 -	- Rated speed rpm : 1300 - Aneroid pressure
	hPa : 700
(B) SETTING OF INJECTION PUMP	Del. quantity
WITH GOVERNOR	- cm3/1000 strokes : 89.0
1	- Tolerance
AUTAR ALPRIC TOLUR	cm3/1000 strokes : + 1.0
GUIDE SLEEVE TRAVEL	- Check tolerance - cm3/1000S. : +- 3.0
Rated speed rpm : 300	- Spreed
guide sleeve	- Tolerance
travel mm : 0.91	cm3/1000 strokes : 4.5
Tolerance mm : +- 0.25	Check tolerance
0.4 1 4.7 4.7	- cm3/1000s. : 7.0
Rated speed rpm : 1353 - guide sleeve	
travel mm : 7.14	
Tolerance mm : + 0.25	CONTROL LEVER
	-
Rated speed rpm : 1130	- control lever
guide sleeve	position degree : 111.0
travel mm : 5.40 - Tolerance mm : + 0.25 -	- tolerance degree : +- 4.0
Total differential	- RATED SPEED
Rated speed rpm : 610	-
guide sleeve	- rack travel mm : 10.00
travel mm : 2.96	- Rated speed rpm : 1345
Tolerance mm : +- 0.25	- Tolerance 1/min : +- 5
Rated speed rpm : 660	- - rack travel mm : 4.00
guide steeve	- Rated speed rpm : 1445
travel mm : 3.31	Tolerance 1/min : + 15
Tolerance mm : + 0.25	•
700	rack travel mm : 0.50
Rated speed rpm : 780	- Tolerance mm : + 0.50 - Rated speed rpm : 1550
guide sleeve + travel mm : 3.72 +	- Kated speed (pill . 1330
Tolerance mm : + 0.25	•
+	
Rated speed rpm : 1679	LOW IDLE
guide sleeve	•
travel mm : 12.00 + Tolerance mm : + 0.25 +	- control lever
TOTEL GIRLE HAIL . TO U.C.)	position degree : 73.0
Rated speed rpm : 1780	tolerance degree : + 4.0
- 1 1	<u> </u>

Testing:

Rated speed rpm	:	300
rack travel mm	:	4.40
Tolerance mm	: 4	→ 0.10

Rated speed rpm : 200

CRT mm min.	:	>	5.00
-------------	---	---	------

TORQUE CONTROL

Rated speed rpm	:	1300
rack travel mm	:	11.00
Tolerance mm	:	← 0.05

Rated speed rpm	:	750
rack travel mm	:	11.00
Tolerance mm	: +	-0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	700
rack travel mm	:	11.00
Tolerance mm	: +	- 0.05

MEASUREMENT

Pressure hPa	:	_
Rated speed rpm	:	500
Tolerance mm	: +	- 0.10

Rated	speed	המז	:	500
114664			•	

Pressure hPa	•	230	
rack travel mm	:	0.90	į
Tolerance mm	: 4	→ 0.10	į

Pressure hPa	:	150
rack travel mm	:	0.30
Tolerance mm	: +-	0.10

START CUT-OUT

Rated	speed	rpm	:	>	100
Rated	speed	rpm	:	<	200

Check

CHECK			
speed	1/min	: >	80
Chasis			

Check speed 1/min : < 220

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	700
Rated speed rpm		750
Del quantity		

vec. quantity		
cm3/1000 strokes	:	82.0
Tolerance		

10fel dilice		
cm3/1000 strokes	: +-	1.5
Check tolerance		
cm3/1000s	: +-	4.0

	-	
Spreed		
Tolerance		
om7/1000 otnobos		4.0

CHOI TOOD SCIOKES	•	0.0
Check tolerance		
cm3/1000s.	:	9.0

Aneroid pressure		
hPa	:	
Rated speed rpm	:	500

Del. quantity cm3/1000 strokes	•	56.0
Tolerance		

cm3/1000 strokes	: +-	1.0
Check tolerance		
cm3/1000s.	: +-	3.0

BREAKAWAY

Rack travel in mm	:	10.00
Rated speed rpm	:	1345
Tolerance 1/min	:	+- 5

STARTING FUEL DELIVERY

Rated speed rpm	:		100
Del. quantity cm3/1000 strokes	:		120.0
Tolerance cm3/1000 strokes	:	1	5.0
Check tolerance cm3/1000s.	:	+-	8.0

LOW IDLE

Rated speed rpm	:	300
rack travel mm	:	4.40
Tolerance mm	: +	- 0.20
Del. quantity		
cm3/1000 strokes	•	12.0

Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.5
Spreed
Tolerance
cm3/1000 strokes : 2.0
Check tolerance
cm3/1000s. : 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.07.95 : ISO 4113 Test oil

Combination No. : 0 403 244 045A

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

: 0 413 204 018 EP type number

Governor

Governer design. : RQV300...1300MW132

: -3

Governer no. : 0 420 083 296

Cust. part No. : 0240740802

Customer-spec. information : MB-NFZ Customer Motor : OM364LA

Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance Check

: +- 0.50

: +- 0.75 tolerance *NW

BASIC SETTING

Rated speed rpm : 1270

Rack travel in mm: 11.15 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed Tolerance

cm3/1000 strokes : 4.5

Check tolerance cm3/1000s. Rated speed rpm	: 7.0 : 300	Rack travel in mm : 10.00 Tolerance mm : +- 2.00
Rack travel in m Tolerance mm	1	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes Tolerance	: 12.0	Rated speed rpm : 1270 Aneroid pressure hPa : 700
cm3/1000 strokes	: +- 2.0	Del. quantity
Check tolerance cm3/1000s.	: +- 4.5	cm3/1000 strokes : 87.0 Tolerance
Spreed Tolerance	‡	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes Check tolerance	+	cm3/1000S. : +- 3.0 Spreed
cm3/1000s.	: 4.0	Tolerance cm3/1000 strokes : 4.5
(B) SETTING OF I	NJECTION PUMP	Check tolerance cm3/1000s. : 7.0
WITH GOVERNOR	‡	
GUIDE SLEEVE TRA	VEL +	CONTROL LEVER
Rated speed rpm	: 300	control lever
guide sleeve travel mm	: 0.91	position degree : 111.0 tolerance degree : + 4.0
Tolerance mm	: + 0.20	toterance degree . 1- 4.0
	1	RATED SPEED
Rated speed rpm	: 1353	
guide sleeve	7.00	rack travel mm : 10.10
travel mm	: 7.02 + : + 0.15 +	Rated speed rpm : 1345 Tolerance 1/min : +- 10
Tolerance mm	: - 0.13	Tolerance 1/min : + 10
Rated speed rpm	: 1090	rack travel mm : 4.00
guide sleeve	t	Rated speed rpm : 1445
travel mm Tolerance mm	: 5.21 + : + 0.25 +	Tolerance 1/min : +- 5
TOTEL BLICE IMI	1	rack travel mm : 0.50
Rated speed rpm	: 790	Tolerance mm : + 0.50
guide sleeve	+	Rated speed rpm : 1550
travel mm	3.98	
Tolerance mm	: + 0.25	
Rated speed rpm guide sleeve	: 1759	LOW IDLE
travel mm	: 12.00	
Tolerance mm	: + 0.25	control lever
Rated speed rpm guide sleeve	: 1870	position degree : 74.0 tolerance degree : + 4.0
travel mm	: 13.50 +	Testing:
Tolerance mm	: + 0.50 +	
	+	Rated speed rpm : 300
CHINE SHEETHE DOCT	TTON	rack travel mm : 4.00 Tolerance mm : + 0.10
GUIDE SLEEVE POST	TITOIA	10(6) alice imi . 7- U. (U
Rated speed rpm	: 1500	Rated speed rpm : 200

CRT mm min. :> 4.70	Check tolerance cm3/1000s. : +- 4.0 Spreed
TORQUE CONTROL	Tolerance cm3/1000 strokes : 6.0
Rated speed rpm : 1270 rack travel mm : 11.15	theck tolerance cm3/1000s. : 9.0
rack travel mm : 11.15 Tolerance mm : + 0.05	Aneroid pressure
Rated speed rpm : 750	+ hPa : - Rated speed rpm : 500 Del. quantity
rack travel mm : 11.15 Tolerance mm : + 0.10	cm3/1000 strokes : 67.0
ANEROID/ALTITUDE	cm3/1000 strokes : +- 1.0
COMPENSATOR TEST	= cm3/1000s. : + 3.0
SETTING	BREAKAWAY
Rated speed rpm : 500	‡
Pressure hPa : 700 rack travel mm : 11.15	+ Rack travel in mm : 10.10 + Rated speed rpm : 1345
Tolerance mm : + 0.05	Tolerance 1/min : + 10
MEASUREMENT	
Pressure hPa : - Rated speed rpm : 500	STARTING FUEL DELIVERY
Tolerance mm : + 0.10	Rated speed rpm : 100 Del. quantity
Rated speed rpm : 500	cm3/1000 strokes : 125.0
Pressure hPa : 230	+ cm3/1000 strokes : ← 5.0
rack travel mm : 0.20 Tolerance mm : +- 0.10	+ Check tolerance + cm3/1000s. : + 8.0
	+
START CUT-OUT	
Rated speed rpm :> 100 Rated speed rpm :< 200	LOW IDLE
	Rated speed rpm : 300
Check speed 1/min : > 80	rack travel mm : 4.00 Tolerance mm : + 0.10
Check	Del. quantity
speed 1/min : < 220	cm3/1000 strokes : 12.0 Tolerance
FUEL DELIVERY CHARACTERISTICS	cm3/1000 strokes : + 2.0 Check tolerance
	+ cm3/1000s. : +- 4.5
Aneroid pressure	Spreed
hPa : 700 Rated speed rpm : 750	+ Tolerance + cm3/1000 strokes : 2.0
Del. quantity	+ Check tolerance
cm3/1000 strokes : 79.0 Tolerance	cm3/1000s. : 4.0
cm3/1000 strokes : +- 1.5	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.05.95 Test oil : ISO 4113

Combination No. : 0 403 244 046

Injection pump

Pump designation : PES4MW100/720RS1525

EP type number : 0 413 204 022

Governor

Governer design. : RQV300...1300MW132

: -13

: 0 420 083 330 Governer no.

Cust. part No. : 0260746202

Customer-spec. information Customer : MB-NFZ Motor : 0M364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

: 4.55 Prestroke mm Tolerance mm : + 0.05

Check

: + 0.10tolerance mm

Rack travel in mm: 20.00 Tolerance mm : \leftarrow 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.50Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rom 1300

Rack travel in mm: 13.30 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +-4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.	: 8.0 ‡	Rated speed rpm : 1780
	+	guide sleeve
Rated speed rpm	+	travel mm : 13.50 Tolerance mm : + 0.50
Rack travel in m Tolerance mm		CUTAE ALERUE PARTITAL
Del. quantity cm3/1000 strokes	: 12.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: + 2.0	Rated speed rpm : 1445
Check tolerance cm3/1000s. Spreed	: + 4.5	Rack travel in mm : 10.00 Tolerance mm : + 2.50
Tolerance	+	
cm3/1000 strokes Check tolerance	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 4.0	Rated speed rpm : 1300 Aneroid pressure
	+	hPa : 1200
(B) SETTING OF IN WITH GOVERNOR	VUECTION PUMP	Del. quantity cm3/1000 strokes : 119.0
	+	Tolerance cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAN	VEL +	Check tolerance
Rated speed rpm	: 300	cm3/1000S. : +- 4.0 Spreed
guide sleeve	+	Tolerance
travel mm	: 0.91	cm3/1000 strokes : 5.0
Tolerance mm	: + 0.25	Check tolerance cm3/1000s. : 8.0
Rated speed rpm guide sleeve	: 1354	
travel mm Tolerance mm	: 7.15 + : + 0.25 +	CONTROL LEVER
	+	
Rated speed rpm guide sleeve	: 1130	control lever position degree : 113.0
travel mm	: 5.40	tolerance degree : + 4.0
Tolerance mm	: + 0.25	RATED SPEED
Rated speed rpm	: 610	
guide sleeve travel mm	: 2.96	rack travel mm : 12.30 Rated speed rpm : 1345
Tolerance mm	: + 0.25	Tolerance 1/min : + 5
Rated speed rpm	: 660	rack travel mm : 4.00
guide sleeve	7.74	Rated speed rpm : 1475
travel mm Tolerance mm	: 3.31 : + 0.25	Tolerance 1/min : + 15
	+	rack travel mm : 0.50
Rated speed rpm guide sleeve	: 780	Tolerance mm : +- 0.50 Rated speed rpm : 1550
travel mm	: 3.72	
Tolerance mm	: ← 0.25	
Rated speed rpm	: 1679	LOW IDLE
guide sleeve travel mm	: 12.00	
Tolerance mm	: + 0.25	
	·	

		+ Check
control lever position degree	• 7/. O	+ speed 1/min :> 80 + Check
tolerance degree	· + 4.0	+ speed 1/min : < 220
toter drice degree	• • •••	T Speed Militi
Testing:		
		↓ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 300	+
rack travel mm		+ Aneroid pressure
Tolerance mm	: + 0.10	+ hPa : 1200
Data dama adam	. 200	Rated speed rpm : 600
Rated speed rpm	: 200	+ Del. quantity + cm3/1000 strokes : 117.0
CRT mm min.	: > 4.50	Tolerance
Cut inti mutit	. > 4.50	cm3/1000 strokes : +- 2.0
TORQUE CONTROL		- cm3/1000s. : +- 5.0
		Spreed
Rated speed rpm	: 1300	+ Tolerance
rack travel mm Tolerance mm	: 13.30	+ cm3/1000 strokes : 6.0
Tolerance mm	: +- 0.05	+ Check tolerance
Data damar dam	. 400	Aneroid pressure hPa : 1200 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 117.0 Tolerance cm3/1000s. : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 50.0
Rated speed rpm rack travel mm		Aneroid pressure
Tolerance mm		+ hPa : -
rocci di lec min		Rated speed rpm : 500
		Del. quantity
ANEROID/ALTITUDE		- cm3/1000 strokes : 50.0
COMPENSATOR TEST		+ loterance
		+ cm3/1000 strokes : +- 1.0
		† Check tolerance
SETTING		+ cm3/1000s. : + 3.0
Rated speed rpm	: 500	Ĭ
Pressure hPa	1200	BREAKAWAY
rack travel mm	: 13.90	
Tolerance mm	: +- 0.05	4
		Rack travel in mm: 12.30
MEASUREMENT		+ Rated speed rpm : 1345
		Tolerance 1/min : + 5
Pressure hPa		†
Rated speed rpm Tolerance mm		†
TOTEL ALICE IM	. +- 0.10	T STARTING FUEL DELIVERY
Rated speed rpm	: 500	CONTEND I DEE DEED VELLE VIII
		+ Rated speed rpm : 100
Pressure hPa	: 750	+ Del. quantity
rack travel mm	: 3.70	+ cm3/1000 strokes : 150.0
Tolerance mm	: ← 0.10	+ Tolerance
0	. 750	+ cm3/1000 strokes : + 5.0
Pressure hPa	: 350	+ Check tolerance + cm3/1000s. : + 8.0
rack travel mm Tolerance mm	: 1.20 : + 0.10	+ cm3/1000S. : + 8.0
IOCEI GILLE IINN	0.10	\mathbf{I}
·····		
START CUT-OUT		+
		+ LOW IDLE
Rated speed rpm		
Rated speed rpm	: < 200	+ Rated speed rpm : 300
		+ rack travel mm : 3.90

Tolerance mm Del. quantity	: +-	0.20
cm3/1000 strokes Tolerance	:	12.0
cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	2.0
cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 19.05.95 Test oil : ISO 4113

Combination No. : 0 403 244 047

Injection pump

Pump designation : PES4MW100/720RS1525 EP type number : 0 413 204 022

Governor

Governer design. : RQV300...1300MW132

: -13

Governer no. : 0 420 083 330

Cust. part No. : 0260746302

Customer—spec. information Customer : MB-NFZ Motor : 0M364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270
Tolerance : ← 0.50

Check

tolerance "NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance	<u> </u>	
cm3/1000s.	: 8.0	Rated speed rpm : 1780
CHD/ 10003.	· 0.3	guide sleeve
Rated speed rpm	: 300	travel mm : 13.50
rated speed (pill	. 500	Tolerance mm : + 0.50
Rack travel in m	m: 3.90	TOTEL GIVE IND
Tolerance mm	m: 3.90 + :+- 0.20 +	<u> </u>
Del. quantity	· +- 0.20	GUIDE SLEEVE POSITION
cm3/1000 strokes	: 12.0	GOIDE SEEENE LOSTITON
Tolerance	· '2.0	Rated speed rpm : 1445
cm3/1000 strokes	· - 20 I	nated speed (pill . 144)
Check tolerance	Ι Ι	Rack travel in mm: 10.00
cm3/1000s.	: +- 4.5	Tolerance mm : + 2.50
Spreed	1	Total differ than 2.50
Tolerance	1	
cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	1	TOLK COMP VEGETCH HI TOLK COMP OF OF
cm3/1000s.	: 4.0	Rated speed rpm : 1300
	1	Aneroid pressure
	1	hPa : 1200
(B) SETTING OF IN	NJECTION PUMP +	Del. quantity
WITH GOVERNOR	+	cm3/1000 strokes : 119.0
	+	Tolerance
	+	cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAN	VEL +	Check tolerance
	+	cm3/1000s. : +- 4.0
Rated speed rpm	: 300 +	Spreed
guide sleeve	+	Tolerance
travel mm	: 0.91	cm3/1000 strokes : 5.0
Tolerance mm	: + 0.25 +	Check tolerance
5	<u> </u>	cm3/1000s. : 8.0
Rated speed rpm	: 1354	
guide sleeve	. 345	
travel mm Tolerance mm	: 7.15 + : + 0.25 +	CONTROL I SUED
roterance mm	1 0.0	CONTROL LEVER
Rated speed rpm	: 1130	control lever
guide sleeve	· 1138	position degree : 113.0
travel mm	: 5.40	tolerance degree : + 4.0
Tolerance mm	+ 0.25	toter unite degree 4.0
CAPACINITIES HER	1	RATED SPEED
Rated speed rpm	: 610	
guide sleeve	1	rack travel mm : 12.30
travel mm	: 2.96	Rated speed rpm : 1345
Tolerance mm	: + 0.25	Tolerance 1/min : + 5
	+	
Rated speed rpm	: 660	rack travel mm : 4.00
guide sleeve	+	Rated speed rpm : 1475
travel mm	: 3.31 +	Tolerance 1/min : + 15
Tolerance mm	: + 0.25	
	+	rack travel mm : 0.50
Rated speed rpm	: 780 +	Tolerance mm : + 0.50
guide sleeve	+	Rated speed rpm : 1550
travel mm	3.72	
Tolerance mm	: ← 0.25 +	
Ontal autority	. 4/70	LOUTALE
Rated speed rpm	: 1679 +	LOW IDLE
guide sleeve	. 12.00	
travel mm	: 12.00 + : + 0.25 +	
Tolerance mm	0.65	

control lever position degree tolerance degree	: 74.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.90 : ← 0.10
Rated speed rpm	: 200
CRT mm min.	: > 4.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.30 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.30 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 750 : 3.70 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 350 : 1.20 : + 0.10
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 200

Check speed 1/min Check speed 1/min	: > 80 : < 220
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 600 : 117.0 : + 2.0 : + 5.0
cm3/1000 strokes Check tolerance	: 6.0
cm3/1000s.	: 9.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 50.0 : + 1.0 : + 3.0
Rack travel in mm Rated speed rpm Tolerance 1/min	: 12.30 : 1345 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm rack travel mm	: 300 : 3.90

Tolerance mm	: +	0.20
Del. quantity cm3/1000 strokes	:	12.0
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance cm3/1000S.	:	4.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 19.06.95 Edition Test oil : ISO 4113 Combination No. : 0 403 244 048 Injection pump Pump designation : PES4MW100/720RS1524 : 0 413 204 021 EP type number Governor Governer design. : RQV300...1300MW132 : -12 : 0 420 083 329 Governer no. : 0240741002 Cust. part No. Customer-spec. information : MB-NFZ Customer : 0M364LA Motor Power KW 77.0 TEST BENCH REQUIREMENTS Inlet line : 3.1 Test oil inlet 40 temp. °C Tolerance °C 2.0 : 1 419 992 198 Overflow valve Inlet press. bar : Test nozzle holde assembly : 1 688 901 101 Opening pressure 208.5 bar 1.5 Tolerance bar

: 1 680 750 089

8.0

x inside diameter: 3.0 x length mm : 600			
REMARKS			
(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values			
BEGINNING OF DELIVERY			
Test pressure bar : 31.0 Tolerance bar : + 1.0			
Prestroke mm : 4.55 Tolerance mm : +- 0.05 Check			
tolerance mm : + 0.10			
Rack travel in mm : 21.00			
Firing order : 1-3-4-2			
Phasing : 0-90-180-270 Tolerance : +- 0.50 Check tolerance *NW : +- 0.75			
BASIC SETTING			
Rated speed rpm : 1300			
Rack travel in mm : 17.00 Tolerance mm : + 0.05			
Del. quantity cm3/1000 strokes : 89.0			
Tolerance cm3/1000 strokes : + 1.0			
Check tolerance cm3/1000s. : + 3.0			
Spreed Tolerance cm3/1000 strokes : 4.5			
Check tolerance cm3/1000s. : 7.0			

Test lines

Outside diameter :

		•
		† guide sleeve
Rated speed rpm	: 300	+ travel mm : 13.50
		+ Tolerance mm : + 0.50
Rack travel in mm	o: 4.40	→
Tolerance mm	: 0.20	
Del. quantity		→ GUIDE SLEEVE POSITION
cm3/1000 strokes	: 12.0	+
Tolerance		+ Rated speed rpm : 1350
cm3/1000 strokes	: ← 2.0	1
Check tolerance		A Rack travel in mm: 10.00
cm3/1000s.	: +- 4.5	+ Tolerance mm : + 2.00
Spreed	• ,,,,	
Tolerance		
cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		TOLE COAD DELIVERY AT TOLE COAD OTO.
cm3/1000s.	: 4.0	Rated speed rpm : 1300
(115) 10003.	. 4.0	Aneroid pressure
		+ hPa : 700
(B) SETTING OF IN	HECTTON DUMP	Del. quantity
WITH GOVERNOR	DECITOR FOME	+ cm3/1000 strokes : 89.0
WITH GOVERNOR		+ Tolerance
CHINE CLEENE TOAN		
GUIDE SLEEVE TRAV	EL	+ Check tolerance
Sexual annual annual	. 700	+ cm3/1000s. : + 3.0
Rated speed rpm	: 300	+ Spreed
guide sleeve	0.04	+ Tolerance
travel mm	: 0.91	+ cm3/1000 strokes : 4.5
Tolerance mm	: +· 0.20	+ Check tolerance
	4.77	+ cm3/1000s. : 7.0
Rated speed rpm	: 1353	+
guide sleeve		†
travel mm	: 7.14	
Tolerance mm	: +- 0.15	+ CONTROL LEVER
		+
Rated speed rpm	: 1130	+ control lever
guide sleeve		+ position degree : 111.0
travel mm	: 5.40	+ tolerance degree : + 4.0
Tolerance mm	: + 0.25	+
		+ RATED SPEED
Rated speed rpm	: 610	+
guide sleeve		+ rack travel mm : 10.00
travel mm	: 2.96	+ Rated speed rpm : 1345
Tolerance mm	: - 0.25	+ Tolerance 1/min : + 5
		
Dodood amond man		+ rack travel mm : 4.00
kated speed rpm	: 660	T ICUN LICANCE HAND . 4.UU
Rated speed rpm guide sleeve	: 660	
guide sleeve		
guide sleeve travel mm	: 3.31	Rated speed rpm : 1445
guide sleeve		Rated speed rpm : 1445 Tolerance 1/min : + 15
guide sleeve travel mm Tolerance mm	: 3.31 : + 0.25	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm	: 3.31	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 3.31 : + 0.25 : 780	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 3.31 : + 0.25 : 780 : 3.72	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 3.31 : + 0.25 : 780	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 3.31 : + 0.25 : 780 : 3.72 : + 0.25	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 3.31 : + 0.25 : 780 : 3.72	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	 3.31 + 0.25 : 780 ∴ 3.72 : + 0.25 : 1679 	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 3.31 : + 0.25 : 780 : 3.72 : + 0.25 : 1679 : 12.00	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	 3.31 + 0.25 : 780 ∴ 3.72 : + 0.25 : 1679 	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE control lever
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 3.31 : + 0.25 : 780 : 3.72 : + 0.25 : 1679 : 12.00	Rated speed rpm : 1445 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550 LOW IDLE

Testina:

300 Rated speed rpm 4.40 rack travel mm Tolerance mm 0.10

Rated speed rom 200

CRT mm min. : > 5.00

TORQUE CONTROL

Rated speed rpm 1300 11.00 rack travel mm Tolerance mm 0.05

Rated speed rpm 750 11.00 rack travel mm Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

500 Rated speed rpm 700 Pressure hPa rack travel mm 11.00 : +- 0.05 Tolerance mm

MEASUREMENT

Pressure hPa Rated speed rpm 500 Tolerance mm 0.10

500 Rated speed rpm

230 Pressure hPa 0.90 rack travel mm Tolerance mm : + 0.10

150 Pressure hPa 0.30 rack travel mm Tolerance mm 0.10

START CUT-OUT

Rated speed rpm : > 100 : < Rated speed rpm 200

Check

speed 1/min : > 80

Check

220 speed 1/min : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

700 hPa 750 Rated speed rom Del. quantity

cm3/1000 strokes : 82.0

Tolerance

cm3/1000 strokes 1.5 Check tolerance cm3/1000s. 4.0 : +-

Spreed Tolerance

cm3/1000 strokes : 6.0 Check tolerance

9.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 56.0 Tolerance

cm3/1000 strokes 1.0

Check tolerance

cm3/1000s. 3.0 : +-

BREAKAWAY

Rack travel in mm: 10.00 Rated speed rpm : Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : +-5.0

Check tolerance

cm3/1000s.8.0

LOW IDLE

Rated speed rpm 300 4.40 rack travel mm : Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 12.0

Tolerance		
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s. Spreed	: +-	4.5
Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.04.95 Test oil : ISO 4113

Combination No. : 0 403 246 035

Injection pump

Pump designation : PES6MW100/720RS1517

: -3

EP type number : 0 413 206 020

Governor

Governer design. : RQV300...1300MW132

: -2

Governer no. : 0 420 083 293

Cust. part No. : 0240744202

Customer—spec. information Customer : MB—NFZ

Motor : 0M366LA Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.25

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 95.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

T. I	1	and the sales of
Tolerance cm3/1000 strokes	· / F	guide sleeve
CMS/ 1000 Strokes	· 4.3	travel mm : 12.00 Tolerance mm : +- 0.25
Check tolerance		Tolerance mm : +- 0.25
cm3/1000s.	: 7.0	Rated speed rpm : 1780
CIID/10005.	7.0	Rated speed rpm : 1780 guide sleeve
Rated speed rpm	: 300	travel mm : 13.50
rated speed (bill	· 500	Tolerance mm : +- 0.50
Rack travel in mm	: 3.50	roter drice min . F- 9.50
Tolerance mm	: + 0.10	
Del. quantity	1	GUIDE SLEEVE POSITION
cm3/1000 strokes	: 12.0	GOIDE SEELVE (OSITION
Tolerance	1	Rated speed rpm : 1400
cm3/1000 strokes	: + 2.0	
Check tolerance		Rack travel in mm : 13.00
cm3/1000s.	: +- 4.5	Tolerance mm : + 2.00
Spreed		
Tolerance	1	
cm3/1000 strokes	: 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	1	
cm3/1000S.	: 4.0	Rated speed rpm : 1300
	1	Aneroid pressure
	+	hPa : 1000
(B) SETTING OF IN	JECTION PUMP	Del. quantity
WITH GOVERNOR	+	cm3/1000 strokes : 95.0
	+	Tolerance
		cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVI	EL +	Check tolerance
	+	cm3/1000s. : +- 3.0
Rated speed rpm	: 300 +	Spreed
guide sleeve	+	Tolerance
travel mm	: 1.02	cm3/1000 strokes : 4.5
Tolerance mm	: + 0.25 +	Check tolerance
	+	cm3/1000s. : 7.0
Rated speed rpm	: 1353	
guide sleeve	<u> </u>	
travel mm	: 6.70	
Tolerance mm	: + 0.25	CONTROL LEVER
6-4-d 4	1400	control lover
Rated speed rpm	: 1100	control lever
guide sleeve	†	position degree : 116.0
travel mm	: 4.76	tolerance degree : + 4.0
Tolerance mm	: + 0.25	DATEN COCCN
Dated aread	: 490	RATED SPEED
Rated speed rpm	: 490	mack traval mm . 40.20
guide sleeve	: 2.25	rack travel mm : 10.20
travel mm		Rated speed rpm : 1345 Tolerance 1/min : + 5
Tolerance mm	: +- 0.25	forerance frame : The D
Pated speed spe	: 540	rack travel mm : 4.00
Rated speed rpm	: 540	Rated speed rpm : 1460
guide sleeve travel mm	: 2.50	Tolerance 1/min : +- 15
Tolerance mm	÷ + 0.25	TO CEI DINCE TAIRER . TE 13
roterance mi	0.25	rack travel mm : 0.50
Rated speed non	: 710	Tolerance mm : + 0.50
Rated speed rpm	. 10	
guide sleeve	: 3.03	Rated speed rpm : 1550
travel mm		
Tolerance mm	: +- 0.25	
Datad succed suc	. 1407	I OU TO E
Rated speed rpm	: 1683 +	LOW IDLE

		+ Check
control lever		+ speed 1/min :> 80
position degree	• 71 0	+ Check
tolerance degree	, , , , o	speed 1/min : < 240
toterance degree	, T- 4,0	T Speed 1/11/11 . \ 240
Tootings		
Testing:		FUEL DELIVERY CHARACTERISTICS
Detect eneed ann	. 700	T FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 300	† • · · · · · · · · · · · · · · · · · ·
rack travel mm	: 3.50	+ Aneroid pressure
Tolerance mm	: ← 0.10	+ hPa : 1000
		- Rated speed rpm : 600
Rated speed rpm	: 200	+ Del. quantity
		+ cm3/1000 strokes : 87.0
CRT mm min.	: > 4.20	+ Tolerance
		+ cm3/1000 strokes : + 1.5
		+ Check tolerance
TORQUE CONTROL		+ cm3/1000s. : +- 4.0
		+ Spreed
Rated speed rpm	: 1300	+ Tolerance
rack travel mm		+ cm3/1000 strokes : 6.0
Tolerance mm		- Check tolerance
		+ cm3/1000s. : 9.0
Rated speed rpm	: 600	1
		Aneroid pressure
rack travel mm Tolerance mm		hPa : -
rocer arice likit	. 1 0.1%	Rated speed rpm : 500
ANIFOOTO (AL TITUDE		
ANEROID/ALTITUDE		
COMPENSATOR TEST		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
SETTING		+ cm3/1000s. : $+$ 3.0
		†
Rated speed rpm	: 500	
Pressure hPa		+ BREAKAWAY
rack travel mm		+
Tolerance mm	: +- 0.05	+
		+ Rack travel in mm : 10.20
MEASUREMENT		+ Rated speed rpm : 1345
		+ Tolerance 1/min : + 5
Pressure hPa	-	+
Rated speed rpm	: 500	+
Tolerance mm	: ← 0.10	
Rated speed rpm	: 500	1
marca opeca i più		Rated speed rpm : 100
Pressure hPa	: 350	Del. quantity
rack travel mm	: 1.45	- cm3/1000 strokes : 125.0
Tolerance mm	: + 0.10	+ Tolerance
rocerance inin	0.10	cm3/1000 strokes : +- 5.0
Pressure hPa	: 250	Check tolerance
	: 250	+ cm3/1000s. : + 8.0
rack travel mm		† cm3/1000s. : + 0.0
Tolerance mm	: ← 0.10	†
		†
		+
START CUT-OUT		A AAA
		+ LOW IDLE
Rated speed rpm	: > 100	+
Rated speed rpm	: < 220	+ Rated speed rpm : 300

rack travel mm Tolerance mm	: : +-	3.50 0.10
Del. quantity cm3/1000 strokes Tolerance	:	12.0
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s. Spreed	: +-	4.5
Tolerance cm3/1000 strokes Check tolerance	:	2.0
cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.06.95 Edition Test oil : ISO 4113

Combination No. : 0 403 246 036

Injection pump

Pump designation : PES6MW100/720RS1517

: -2

: 0 413 206 019 EP type number

Governor

Governer design. : RQV300...1300MW132

: 0 420 083 299 Governer no.

Cust. part No. : 0240744402

Customer-spec. information : MB-NFZ Customer : 0M366LA Motor Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 : +- 0.05 Tolerance mm

Check

: **←** 0.10 tolerance mm

Rack travel in mm: 20.00 Tolerance mm : \leftarrow 1.00

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 13.30 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: + 3.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 4.5	guide sleeve travel mm : 12.00 Tolerance mm :+- 0.25
Check tolerance cm3/1000s. : 7.0	- Rated speed rpm : 1780
Rated speed rpm : 300	- guide sleeve - travel mm : 13.50 - Tolerance mm : + 0.50
Rack travel in mm: 3.80 Tolerance mm: +- 0.20	
Del. quantity cm3/1000 strokes : 12.0 Tolerance	- GUIDE SLEEVE POSITION - Rated speed rpm : 1450
cm3/1000 strokes : +- 2.0 Check tolerance	Rack travel in mm : 13.00
cm3/1000s. : +- 4.5 Spreed	- Tolerance mm : +- 2.00
Tolerance cm3/1000 strokes : 2.0 Check tolerance	- FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 4.0	- Rated speed rpm : 1300 - Aneroid pressure
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- hPa : 1000 - Del. quantity - cm3/1000 strokes : 118.0
GUIDE SLEEVE TRAVEL	- Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
Rated speed rpm : 300	- cm3/1000s. : +- 3.0 - Spreed
guide sleeve travel mm : 1.02	- Tolerance - cm3/1000 strokes : 4.5
Tolerance mm : + 0.25	- Check tolerance - cm3/1000s. : 7.0
Rated speed rpm : 1353 guide sleeve	-
travel mm : 6.70	
Tolerance mm : + 0.25	CONTROL LEVER
Rated speed rpm : 1100 + guide sleeve +	- control lever - position degree : 120.0
travel mm : 4.76 +	tolerance degree : + 4.0
Tolerance mm : + 0.25	- RATED SPEED
Rated speed rpm : 490	
guide steeve +	rack travel mm : 12.30
travel mm : 2.25	Rated speed rpm : 1345
Tolerance mm : + 0.25	Tolerance 1/min : +- 5
Rated speed rpm : 540	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1485
travel mm : 2.50 + Tolerance mm : + 0.25 +	Tolerance 1/min : + 15
Toterance likit	rack travel mm : 0.50
Rated speed rpm : 710	Tolerance mm : +- 0.50
guide sleeve	Rated speed rpm : 1550
travel mm : 3.03 +	
Tolerance mm : \leftarrow 0.25	
Rated speed rpm : 1683	LOW IDLE

control lever position degree tolerance degree	: 72.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.80 : + 0.10
Rated speed rpm	: 200
CRT mm min.	: > 4.50
Rated speed rpm rack travel mm	: 490 : 2.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 13.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.30 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 13.30 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : +- 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 600 : 3.00 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 300 : 1.20 : + 0.10
START CUT-OUT	

Rated speed rpm Rated speed rpm	: > 100 : < 200
Check speed 1/min Check	: > 80
speed 1/min	: < 220
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 1000
Rated speed rpm Del. quantity cm3/1000 strokes	: 600 : 119.0
Tolerance cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000s.	: ← 4.0
Spreed Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 9.0
Aneroid pressure	•
Rated speed rpm Del. quantity	500
cm3/1000 strokes Tolerance	: 48.0
cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 3.0
BREAKAWAY	
Rack travel in man Rated speed rpm Tolerance 1/min	: 12.30 : 1345 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100

kated speed rpili	•	100
Del. quantity		
cm3/1000 strokes	:	150.0
Tolerance		
cm3/1000 strokes	: +-	- 5.0
Check tolerance		
cm3/1000s.	: +-	- 8.0

LOW IDLE

Rated speed rpm	: 300
rack travel mm	: 3.80
Tolerance mm	: ← 0.20
Del. quantity	4.5.
cm3/1000 strokes	: 12.0
Tolerance	
cm3/1000 strokes	: ← 2.0
Check tolerance	
cm3/1000s.	: +- 4.5
Spreed	
Tolerance	
cm3/1000 strokes	: 2.0
Check tolerance	
cm3/1000s.	: 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.04.95 Edition Test oil : ISO 4113

Combination No. : 0 403 246 043

Injection pump

Pump designation : PES6MW100/720RS1523

EP type number : 0 413 206 024

Governor

Governer design. : RQV300...1300MW148

Governer no. : 0 420 083 321

Cust. part No. : 0250744302

Customer-spec. information : MB-NFZ Customer : 0M366LA Motor Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 4.55 Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm: 21.00

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.50

Check

: + 0.75tolerance *NW

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.40 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 98.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed Tolerance

Check tolerance		+
cm3/1000s.	: 7.0	GUIDE SLEEVE POSITION
Rated speed rpm	: 300	Rated speed rpm : 1500
Rack travel in mm		+
Tolerance mm Del. quantity		Rack travel in mm: 10.00 Tolerance mm: + 2.50
cm3/1000 strokes Tolerance	: 12.0	‡
cm3/1000 strokes Check tolerance	: +- 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. Spreed	: + 4.5	Rated speed rpm : 1300 Aneroid pressure
Tolerance cm3/1000 strokes	: 2.0	hPa : 700 + Del. quantity
Check tolerance		cm3/1000 strokes : 98.0
cm3/1000s.	: 4.0	+ cm3/1000 strokes : + 1.0
(B) SETTING OF IN	JECTION PUMP	Check tolerance cm3/1000s. : + 3.0
WITH GOVERNOR		Spreed Tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000 strokes : 4.5 Check tolerance
Rated speed rpm	: 300	+ cm3/1000s. : 7.0
guide sleeve travel mm	: 0.92	<u> </u>
Tolerance mm	: + 0.25	CONTROL LEVER
Rated speed rpm guide sleeve	: 1354	control lever position degree : 118.0
travel mm	: 9.32	tolerance degree : + 4.0
Tolerance mm	: +- 0.25	+ RATED SPEED
Rated speed rpm guide steeve	: 1077	rack travel mm : 10.40
travel mm	: 7.05	Rated speed rpm : 1345
Tolerance mm	: + 0.25	Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 514	rack travel mm : 4.00 Rated speed rpm : 1455
travel mm	: 2.14	Tolerance 1/min : + 15
Tolerance mm	: +- 0.25	rack travel mm : 0.50
Rated speed rpm guide sleeve	: 564	+ Tolerance mm : + 0.50 + Rated speed rpm : 1550
travel mm Tolerance mm	: 2.60 : +- 0.25	1
Rated speed rpm	: 740	LOW IDLE
guide sleeve		+
travel mm Tolerance mm	: 3.93 : ← 0.25	control lever
Rated speed rpm	: 1720	+ position degree : 75.0 + tolerance degree : +- 4.0
guide sleeve travel mm Tolerance mm	: 13.50 : +- 0.50	Testing:
. Georgia of the	0.50	į.

Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.00 : +- 0.10	Check speed 1/min : < 240
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 4.70	Aneroid pressure hPa: 700 Rated speed rpm: 750
TORQUE CONTROL		Del. quantity cm3/1000 strokes : 88.0
Rated speed rpm rack travel mm	: 1300 : 11 40	Tolerance cm3/1000 strokes : +- 1.5
Tolerance mm	: +- 0.05	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.40	Spreed Tolerance
Tolerance mm	: ← 0.10	cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm rack travel mm	: 600 : 11.40	cm3/1000s. : 9.0
Tolerance mm		Aneroid pressure hPa : 700
ANEROID/ALTITUDE		hPa : 700 Rated speed rpm : 600 Del. quantity
COMPENSATOR TEST		cm3/1000 strokes : 88.0 Tolerance
SETTING		+ cm3/1000 strokes : + 1.5 Check tolerance
Rated speed rpm	: 500	cm3/1000s. : +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 11.40	+ Aneroid pressure + hPa : - + Rated speed rpm : 500
MEASUREMENT	0.10	Del. quantity cm3/1000 strokes : 57.0
Pressure hPa	•	Tolerance cm3/1000 strokes : +- 1.0
Rated speed rpm Tolerance mm		Check tolerance + cm3/1000s. : + 3.0
Rated speed rpm		<u> </u>
Pressure hPa	: 350	+ BREAKAWAY
rack travel mm Tolerance mm	: 1.40 : + 0.10	Rack travel in mm: 10.40
Pressure hPa rack travel mm	: 250 : 0.70	Rated speed rpm : 1345 Tolerance 1/min : + 5
Tolerance mm	: + 0.10	
START CUT-OUT		- STARTING FUEL DELIVERY
Rated speed rpm	: > 100	Rated speed rpm : 100 Del. quantity
Rated speed rpm		cm3/1000 strokes : 125.0 Tolerance
Check speed 1/min	: > 80	cm3/1000 strokes : + 5.0 Check tolerance
		+ cm3/1000s. : + 8.0

LOW IDLE

		300
:		4.00
:	+-	0.20
:		12.0
:	+	2.0
•	+-	4.5
:		2.0
:		4.0
		: +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.04.95 Test oil : ISO 4113

Combination No. : 0 403 246 049

Injection pump

Pump designation : PES6MW100/720RS1523

EP type number : 0 413 206 024

Governor

Governer design. : RQV300...1200MW148

: -6

Governer no. : 0 420 083 327

Cust. part No. : 0250745002

Customer-spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 21.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 11.40
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 96.0

iiD/ 1000 Strokes .

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 4

4.5

Check tolerance cm3/1000s.	: 7.0	+
		GUIDE SLEEVE POSITION
Rated speed rpm		Rated speed rpm : 1500
Rack travel in m Tolerance mm		+ Rack travel in mm : 10.00
Del. quantity	0.20	Tolerance mm : +- 2.50
cm3/1000 strokes Tolerance	: 12.0	<u> </u>
cm3/1000 strokes	: + 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: +- 4.5	Rated speed rpm : 1200
Spreed Tolerance		+ Aneroid pressure + hPa : 700
cm3/1000 strokes	: 2.0	- Del. quantity
Check tolerance	: 4.0	+ cm3/1000 strokes : 96.0
cm3/1000s.	: 4.0	+ Tolerance + cm3/1000 strokes : + 1.0
(B) SETTING OF IN	WIECTION PUMP	+ Check tolerance + cm3/1000s. : +- 3.0
WITH GOVERNOR	1020.2011 1 011	Spreed
		† Tolerance + cm3/1000 strokes : 4.5
GUIDE SLEEVE TRAN	/EL	- Check tolerance
Rated speed rpm	: 300	+ cm3/1000s. : 7.0
guide sleeve	. 500	1
travel mm	: 0.92	
Tolerance mm	: + 0.25	† CONTROL LEVER
Rated speed rpm	: 1214	T control lever
guide sleeve		position degree : 118.0
travel mm	: 8.08 : +- 0.25	tolerance degree : + 4.0
Tolerance mm	. +- 0.23	T RATED SPEED
Rated speed rpm	: 1031	+
guide sleeve	. 7.	+ rack travel mm : 10.40
travel mm Tolerance mm	: 6.74 : +- 0.25	+ Rated speed rpm : 1245 + Tolerance 1/min : + 5
TO CET COTICE TIME	0.2	+ toterance trimin
Rated speed rpm	: 514	rack travel mm : 4.00
guide sleeve travel mm	: 2.14	Rated speed rpm : 1375 Tolerance 1/min : +- 15
Tolerance mm	: +- 0.25	+ loterance min : +- 15
		rack travel mm : 0.50
Rated speed rpm	: 564	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1500
guide sleeve travel mm	: 2.60	+ Rated speed rpm : 1500
Tolerance mm	: ← 0.25	+
Detect onced man	. 7/0	LOU TOLE
Rated speed rpm guide sleeve	: 740	+ LOW IDLE
travel mm	: 3.93	+
Tolerance mm	: + 0.25	+ control lever
Rated speed rpm	: 1720	+ position degree : 75.0 + tolerance degree : + 4.0
guide sleeve travel mm	: 13.50	+ Testing:
Tolerance mm	: + 0.50	1

Rated speed rpm rack travel mm Tolerance mm	: 4.00	Check speed 1/min : < 240
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 4.70	Aneroid pressure hPa : 700 Rated speed rpm : 750
TORQUE CONTROL	$\frac{1}{1}$	Del. quantity cm3/1000 strokes : 88.0
Rated speed rpm rack travel mm		Tolerance cm3/1000 strokes : + 1.5
Tolerance mm	: + 0.05	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm		Spreed Tolerance
Tolerance mm	: + 0.10	cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm rack travel mm	: 11.40	cm3/1000s. : 9.0
Tolerance mm	: + 0.10	Aneroid pressure hPa : 700
ANEROID/ALTITUDE	+	Rated speed rpm : 600 Del. quantity
COMPENSATOR TEST	‡	cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5
SETTING	\pm	Check tolerance cm3/1000s. : + 4.0
Rated speed rpm Pressure hPa		Aneroid pressure
rack travel mm Tolerance mm	: 11.40 : + 0.10	hPa : - Rated speed rpm : 500
MEASUREMENT	1	Del. quantity cm3/1000 strokes : 57.0
Pressure hPa	: - ‡	Tolerance cm3/1000 strokes : +- 1.0
Rated speed rpm Tolerance mm		Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm	: 500	Post Malacon
Pressure hPa	: 350	BREAKAWAY
rack travel mm Tolerance mm	: + 0.10 ±	Rack travel in mm : 10.40 Rated speed rpm : 1245
Pressure hPa rack travel mm	: 250 : 0.70	Tolerance 1/min : + 5
Tolerance mm	: + 0.10	
START CUT-OUT	+	STARTING FUEL DELIVERY
Rated speed rpm		Rated speed rpm : 100 Del. quantity
Rated speed rpm	: < 220	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 5.0
Check speed 1/min	: > 80	Check tolerance : +- 8.0
	·	

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm Del. quantity	: : +-	300 4.00 0.20
cm3/1000 strokes	:	12.0
Tolerance cm3/1000 strokes		2.0
Check tolerance	•	2.0
cm3/1000s.	; +-	4.5
Spreed Tolerance		
cm3/1000 strokes	:	2.0
Check tolerance cm3/1000s.	:	4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.06.95 Edition Test oil : ISO 4113

Combination No. : 0 403 444 144

Injection pump

Pump designation : PES4MW100/720RS1151

EP type number : 0 413 404 104

Governor

Governer design. : RQV300...1300MW67-7

Governer no. : 0 420 083 278

Cust. part No. : 0230745902

Customer-spec. information : MB-NFZ Customer Motor : 0M364A Power KW 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

: 1 417 413 047 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 3.75 : **←** 0.05 Tolerance mm Check tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

: + 0.50 Tolerance

Check

: + 0.75tolerance *NW

BASIC SETTING

Rated speed rpm : 1300

10.85 Rack travel in mm : Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +--3.0

Spreed

Tolerance

Check tolerance +	Del. quantity
cm3/1000s. : 6.0	cm3/1000 strokes : 83.0
	Tolerance
Rated speed rpm : 300	cm3/1000 strokes : +- 1.0
nated speed this . Soo	Check tolerance
Rack travel in mm: 6.40	
Tolerance mm : +- 0.20 +	Spreed
Del. quantity	Tolerance
cm3/1000 strokes : 12.0	cm3/1000 strokes : 3.5
Tolerance +	Check tolerance
cm3/1000 strokes : + 2.0 +	cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : + 4.5	
Spreed	
Tolerance	CONTROL LEVER
cm3/1000 strokes : 3.5	
Check tolerance	control lever
cm3/1000s. : 5.5	
CIIS7 (UUS. : 3.3	
†	tolerance degree : +- 4.0
(2)	0.1772 00772
(B) SETTING OF INJECTION PUMP	RATED SPEED
WITH GOVERNOR +	
+	rack travel mm : 9.80
	Rated speed rpm : 1345
GUIDE SLEEVE TRAVEL +	Tolerance 1/min : +- 5
+	
Rated speed rpm : 300	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1435
travel mm : 1.40	Tolerance 1/min : + 15
Tolerance mm : + 0.25	Total and Triffit 1
Total differ that	rack travel mm : 0.50
Rated speed rpm : 477	Tolerance mm : + 0.50
The state of the s	
guide sleeve	Rated speed rpm : 1500
travel mm : 2.85	
Tolerance mm : + 0.25 +	
†	
Rated speed rpm : 490 +	LOW IDLE
guide sleeve +	
travel mm : 2.93	
Tolerance mm : $+$ 0.25	control lever
+	position degree : 78.0
Rated speed rpm : 1600 +	tolerance degree : + 4.0
guide sleeve	•
travel mm : 11.50 +	Testing:
Tolerance mm : + 0.50 +	3 ·
TO CO. WILL CO. WILL	Rated speed rpm : 300
	rack travel mm : 6.40
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
GOING SPECIAE LOSTLITORA	roter differing . T U. (U
Dated award sum a 4/75	rack travel mm : 2.00
Rated speed rpm : 1435	
1	Rated speed rpm : 510
Rack travel in mm: 9.80 +	Tolerance 1/min : + 30
Tolerance mm : + 2.00 +	
+	Rated speed rpm : 200
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. :> 8.00
+	
Rated speed rpm : 1300	
Aneroid pressure	TORQUE CONTROL
hPa : 700	
,,, 4	

Rated speed rpm rack travel mm Tolerance mm	: 10.85 : +- 0.05	Aneroid pressure hPa : 700 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance
Rated speed rpm rack travel mm	: 11.65	cm3/1000 strokes : 77.0 Tolerance
Tolerance mm Rated speed rpm	: + 0.05	cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0
rack travel mm Tolerance mm	: 11.65	Spreed Tolerance
Rated speed rpm	: 1175	cm3/1000 strokes : 5.0 Check tolerance
rack travel mm Tolerance mm	: 11.40 : + 0.10	cm3/1000s. : 7.0
		Aneroid pressure
ANEROID/ALTITUDE COMPENSATOR TEST		Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 46.0
SETTING		+ Cm3/1000 strokes : 40.0 + Tolerance + cm3/1000 strokes : +- 1.0
	- 500	+ Check tolerance
Rated speed rpm Pressure hPa rack travel mm	: 700	cm3/1000s. : +- 3.0
Tolerance mm		BREAKAWAY
MEASUREMENT		Rack travel in mm: 9.80
Pressure hPa Rated speed rpm	: - : 500	+ Rated speed rpm : 1345 + Tolerance 1/min : +- 5
rack travel mm Tolerance mm	: 9.75	‡
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa	: 300	Rated speed rpm : 100
rack travel mm Tolerance mm	: 11.40 : + 0.10	+ Del. quantity + cm3/1000 strokes : 83.0 + Tolerance
Pressure hPa	: 150	+ cm3/1000 strokes : +- 5.0
rack travel mm Tolerance mm	: 10.40 : +- 0.10	+ Check tolerance + cm3/1000s. : + 8.0
START CUT-OUT		
Rated speed rpm Rated speed rpm		LOW IDLE
Check		Rated speed rpm : 300 + rack travel mm : 6.40
speed 1/min	: > 80	+ Tolerance mm : + 0.20
Check speed 1/min	: < 230	Del. quantity cm3/1000 strokes : 12.0
FUEL DELIVERY CHA	PACTERISTICS	Tolerance cm3/1000 strokes : + 2.0 Check tolerance
TOLL DELIVERY CHA	INAC (ENTO) 100	- cm3/1000s. : + 4.5 + Spreed

Tolerance : 3.5 Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26,04,95 : ISO 4113 Test oil

Combination No. : 0 403 444 151

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0 413 404 121

Governor

Governer design. : RQV300...1300MW139

Governer no. : 0 420 083 304

Cust. part No. : 0250742602

Customer-spec. information Customer : MB-NFZ Motor : 0M364A Power KW : 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance *C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5 bar Tolerance bar 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.70 : ← 0.05 Tolerance mm Check tolerance mm : + - 0.10

20.00 Rack travel in mm: Tolerance mn: + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50Check

tolerance "NW : + - 0.75

BASIC SETTING

Rated speed rpm 1300

Rack travel in mm: 13.15 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 90.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +cm3/1000s. 3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance cm3/1000s. :	6.0	
	+	GUIDE SLEEVE POSITION
• • •	+	Rated speed rpm : 1430
Rack travel in mm : Tolerance mm : +- Del. quantity	7.80 0.10	Rack travel in mm : 10.00 Tolerance mm : + 2.00
cm3/1000 strokes : Tolerance	12.0	TOLET GITCE HAIF
cm3/1000 strokes : +- Check tolerance	2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : +- Spreed	4.5	Rated speed rpm : 1300 Aneroid pressure
Tolerance cm3/1000 strokes :	3.5	hPa : 700 Del. quantity
Check tolerance cm3/1000s. :	5.5	cm3/1000 strokes : 90.0 Tolerance
(D) 05777NG 05 7N150770N	†	cm3/1000 strokes : +- 1.0 Check tolerance
(B) SETTING OF INJECTION WITH GOVERNOR	V PUMP +	cm3/1000s. : +- 3.0 Spreed Tolerance
GUIDE SLEEVE TRAVEL	+	cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0
Rated speed rpm : 3 guide sleeve	300	CIII.57 10003
travel mm : +-	1.27 0.25	CONTROL LEVER
	354	control lever
guide sleeve	+	position degree : 118.0
travel mm : 1 Tolerance mm : +	0.25	tolerance degree : + 4.0 RATED SPEED
Rated speed rpm : 8 guide sleeve	394	rack travel mm : 12.15
	6.18	Rated speed rpm : 1345 Tolerance 1/min : +- 5
	390	rack travel mm : 4.00
guide sleeve travel mm :	2.39	Rated speed rpm : 1455 Tolerance 1/min : +- 15
	0.25	rack travel mm : 0.50
guide sleeve	40	Tolerance mm : +- 0.50 Rated speed rpm : 1550
travel mm : Tolerance mm :+-	3.01 0.25	
Rated speed rpm : 5 guide sleeve	10	LOW IDLE
travel mm :	3.56 0.25	control Lever
Rated speed rpm : 16 guide sleeve	00 ‡	position degree : 76.0 tolerance degree : +- 4.0
	3.50 0.50	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 300 : 7.80 : ← 0.10	Check speed 1/min : < 230
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 9.50	Aneroid pressure hPa : 700 Rated speed rpm : 600
TORQUE CONTROL		Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 78.0
Rated speed rpm rack travel mm	: 1300	Tolerance - cm3/1000 strokes : +- 1.5
Tolerance mm	: + 0.05	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm	: 600	Spreed Tolerance
rack travel mm Tolerance mm	: + 0.10	cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm rack travel mm	: 1000 : 13.30	cm3/1000s. : 7.0
Toterance mm	: + 0.10	Aneroid pressure
ANEROID/ALTITUDE		Rated speed rpm : 500 Del. quantity
COMPENSATOR TEST		cm3/1000 strokes : 49.0 Tolerance
SETTING		+ cm3/1000 strokes : + 1.0 + Check tolerance
Rated speed rpm	: 500	+ cm3/1000s. : + 3.0
Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.40 : + 0.10	BREAKAWAY
MEASUREMENT		Rack travel in mm: 12.15 Rated speed rpm: 1345
Pressure hPa Rated speed rpm Tolerance mm	: 500 : + 0.05	Tolerance 1/min : + 5
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm	: 230 : 1.00 : + 0.10	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 90.0 Tolerance
Pressure hPa rack travel mm	: 150 : 0.40	cm3/1000 strokes : + 5.0 Check tolerance
Tolerance mm	: + 0.10	cm3/1000s. :+ 8.0
START CUT-OUT		<u> </u>
Rated speed rpm Rated speed rpm		LOW IDLE Rated speed rpm : 300
Check speed 1/min	: > 80	rack travel mm : 7.80 Tolerance mm : +- 0.10

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	•	5.5
JIII. 100001	•	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.95 Test oil : ISO 4113

Combination No. : 0 403 446 177

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governer design. : RQV300...1300MW48 Governer no. : 0 420 083 066

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : OM366A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: −300 : +− 0.50

Tolerance : +Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.05
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. :

m3/1000s. : + 3.0

Spreed

Tolerance

	+		
Check tolerance cm3/1000s.	: 6.0	FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm Aneroid pressure	: 1300
Rack travel in mm	. 7.90	hPa	: -
Tolerance mm	· + 0.20 +	Del. quantity	
Del. quantity	+	cm3/1000 strokes	: 78.0
cm3/1000 strokes	: 11.0 +	Tolerance	
Tolerance	†	cm3/1000 strokes	: +- 1.0
	: + 2.0 +	Check tolerance	
Check tolerance cm3/1000s.	: ← 4.5 I	cm3/1000s. Spreed	: ← 3.0
Spreed	· - 4.5	Tolerance	
Tolerance	1	cm3/1000 strokes	: 3.5
cm3/1000 strokes	3.5	Check tolerance	•
Check tolerance	+	cm3/1000s.	: 6.0
cm3/1000s.	5.5		
(D) OFFTILE OF THE	ECTION DUMP	CONTROL LEVER	
(B) SETTING OF INJE	t to the following the first term of the first t		
	+	control lever	447 6
CUITAT CUETUE TONIE		position degree	
GUIDE SLEEVE TRAVEL	+	tolerance degree	: + 4.0
Rated speed rpm : guide sleeve	: 300	RATED SPEED	
travel mm :	1.37	rack travel mm	: 10.00
Tolerance mm :	: + 0.20 +	Rated speed rpm	: 1345
	+	Tolerance 1/min	: ← 5
Rated speed rpm :	1354	rack travel mm	4 00
guide sleeve travel mm :	8.65	Rated speed rpm	: 4.00 : 1440
Tolerance mm :	+ 0.15	Tolerance 1/min	: +- 15
	+		
Rated speed rpm :	885	rack travel mm	: 0.50
guide sleeve	5.00	Tolerance mm	: + 0.50
travel mm : Tolerance mm :	5.01 + 0.25	Rated speed rpm	: 1550
ioterance mm	Ţ		
	490		
guide sleeve	†	LOW IDLE	
travel mm : Tolerance mm :	2.86 + 0.25 +		
roterance mm :	T 0.23	control lever	
Rated speed rpm :	1610	position degree	: 83.0
guide sleeve	+	tolerance degree	: +- 4.0
travel mm :	11.50		
Tolerance mm :	+ 0.50	Testing:	
		Rated speed rpm	• 300
GUIDE SLEEVE POSITI	on I	rack travel mm	: 7.90
TOTAL CAMERA I COLIT	1	Tolerance mm	
Rated speed rpm :	1440		
•	+	Rated speed rpm	: 100
Rack travel in mm :		CDT mm må	. > 9.70
Tolerance mm :	T 2.00	CRT mm min.	: > 8.70
	+		

Rated speed rpm	: 415	†
TOPOUT CONTROL		BREAKAWAY
TORQUE CONTROL		Ť
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 11.05 : + 0.05	Rack travel in mm: 10.00 Rated speed rpm: 1345 Tolerance 1/min: + 5
rack travel mm Tolerance mm	: 11.90	STARTING FUEL DELIVERY
Rated speed rpm rack travel mm Tolerance mm	: 12.10	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance
Rated speed rpm rack travel mm	: 11.20	cm3/1000 strokes : +- 5.0 Check tolerance
Tolerance mm	: +- 0.10	cm3/1000s. : + 8.0
START CUT-OUT		LOW IDLE
Rated speed rpm Rated speed rpm		Rated speed rpm : 300 rack travel mm : 7.90
Check speed 1/min Check	; > 80	Tolerance mm : + 0.20 + Del. quantity + cm3/1000 strokes : 11.0
speed 1/min	: < 250	Tolerance cm3/1000 strokes : + 2.0
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure hPa	:	Tolerance cm3/1000 strokes : 3.5
Rated speed rpm Del. quantity cm3/1800 strokes		Check tolerance cm3/1000s. : 5.5
Tolerance cm3/1000 strokes		‡
Check tolerance cm3/1000S. Spreed	: +- 4.0	<u> </u>
Tolerance cm3/1000 strokes	: 5.0	End of test specification sheet
Check tolerance cm3/1000S.	: 7.0	<u> </u>
Aneroid pressure hPa Rated speed rpm	: - : 585	‡
Del. quantity cm3/1000 strokes Tolerance	: 70.0	‡
cm3/1000 strokes Check tolerance	: +- 1.5	‡
cm3/1000s.	: +- 4.0	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.95 Test oil : ISO 4113

Combination No. : 0 403 446 216

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governer design. : RQV300...1400MW48-8

Governer no. : 0 420 083 175

Cust. part No.

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 715 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.55Tolerance mm : \div 0.05

Check

tolerance \Leftrightarrow : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.75
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed Tolerance

	+		
Check tolerance cm3/1000s.	: 6.0	FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm Aneroid pressure	: 1400
Rack travel in mo	n: 7.90 +	hPa	: -
Tolerance mm	: + 0.20	Del. quantity	
Del. quantity	+	cm3/1000 strokes	: 78.0
cm3/1000 strokes	: 11.0	Tolerance	
Tolerance	+	cm3/1000 strokes	: + 1.0
cm3/1000 strokes	: + 2.0 +	Check tolerance	
Check tolerance	+	cm3/1000s.	: +- 3.0
cm3/1000s.	: + 4.5	Spreed	
Spreed	†	Tolerance	- 7 F
Tolerance cm3/1000 strokes	: 3.5	cm3/1000 strokes Check tolerance	: 3.5
Check tolerance	: 3.5	cm3/1000s.	: 6.0
cm3/1000s.	: 5.5	CIID7 10003.	: 6.0
CHI37 10003.	· 3.5		
(B) SETTING OF IN	JECTION PUMP	CONTROL LEVER	
	+	control lever	
		position degree	: 111.0
GUIDE SLEEVE TRAV	/EL +	tolerance degree	: +- 4.0
Rated speed rpm guide sleeve	: 300	RATED SPEED	
travel mm	: 1.22 +	rack travel mm	: 9.70
Tolerance mm	: + 0.20 +	Rated speed rpm	: 1445
	+	Tolerance 1/min	: - 5
Rated speed rpm	: 1453 +	1 4	4 00
guide sleeve	†	rack travel mm	: 4.00
travel mm	: 8.30	Rated speed rpm	: 1550
Tolerance mm	: ← 0.15	Tolerance 1/min	: ← 15
Rated speed rpm	: 594	rack travel mm	: 0.50
guide sleeve	+	Tolerance mm	: +- 0.50
travel mm	: 3.30	Rated speed rpm	: 1650
Tolerance mm	: + 0.25 +		
	+		
Rated speed rpm	: 400		
guide sleeve	+	LOW IDLE	
travel mm	: 2.30		
Tolerance mm	: + 0.25	control lever	
Poted croad nom	: 1770 I	position degree	: 80.0
Rated speed rpm guide sleeve	· I	tolerance degree	
travel mm	: 11.50	total and degree	• • • • • • • • • • • • • • • • • • •
Tolerance mm	: +- 0.50	Testing:	
	+		
		Rated speed rpm	: 300
GUIDE SLEEVE POSI	TION +	rack travel mm	: 7.90
	+	Tolerance mm	: +- 0.10
Rated speed rpm	: 1590 +		
	+	Rated speed rpm	: 100
Rack travel in mm		CDT *	. > 40.00
Tolerance mm	: + 1.30	CRT mm min.	: > 10.00
	Ť		

TORQUE CONTROL

Rated speed rpm : 1400 rack travel mm : 10.75 Tolerance mm : + 0.05

Rated speed rpm : 750 rack travel mm : 12.25 Tolerance mm : + 0.05

Rated speed rpm : 950 rack travel mm : 11.80 Tolerance mm : + 0.10

Rated speed rpm : 1200 rack travel mm : 10.95 Tolerance mm : ± 0.15

START CUT-OUT

Rated speed rpm : > 100 Rated speed rpm : < 200

Check speed 1/min :

: > 80

speed 1/min

: < 230

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 750
Del. quantity
cm3/1000 strokes : 78.0
Tolerance
cm3/1000 strokes : + 1.5

cm3/1000 strokes : +-Check tolerance

cm3/1000s. : +- 4.0

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.

7.0

BREAKAWAY

Rack travel in mm: 9.70
Rated speed rpm: 1445
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance

cm3/1000 strokes : + 5.0 Check tolerance

cm3/1000s. : + 8.0

LOW IDLE

Rated speed rpm	:	300
rack travel mm	:	7.90
Tolerance mm	: +-	0.20
Del. quantity		
cm3/1000 strokes	:	11.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5
	-	3.13

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.04.95 Test oil : ISO 4113

Combination No. : 0 403 446 217

Injection pump

Pump designation : PES6MW100/720RS1144 EP type number : 0 413 406 138

Governor

Governer design. : RQV300...1300MW48-9

Governer no. : 0 420 083 176

Cust. part No.

Customer—spec. information
Customer : MB-NFZ
Motor : 0M366A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

1	Aneroid pressure
Check tolerance	hPa : -
cm3/1000s. : 6.0	Del. quantity
CIID/ 10000:	cm3/1000 strokes : 78.0
Rated speed rpm : 300	Tolerance
Tarted speed (pin) . 500	cm3/1000 strokes : +- 1.0
Rack travel in mm: 7.90	Check tolerance
Tolerance mm : + 0.10	cm3/1000s. : + 3.0
Del. quantity	Spreed : - 3.0
cm3/1000 strokes : 11.0	Tolerance
Tolerance	cm3/1000 strokes : 3.5
cm3/1000 strokes : + 2.0 +	Check tolerance
Check tolerance	cm3/1000S. : 6.0
cm3/1000s. : + 4.5	CIID/10005. : 6.0
Spreed	
Tolerance + cm3/1000 strokes : 3.5	CONTROL LEVED
1	CONTROL LEVER
Check tolerance +	and all forms
cm3/1000s. : 5.5	control lever
†	position degree : 100.0
(D) OFFICE OF THEFOTTON DIME	tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	DATES ADDES
WITH GOVERNOR	RATED SPEED
†	40.00
2/1706 0/ 051/6 704/6	rack travel mm : 10.00
GUIDE SLEEVE TRAVEL	Rated speed rpm : 1345
1440	Tolerance 1/min : + 5
Rated speed rpm : 1440	
guide steeve	rack travel mm : 4.00
travel mm : 9.50 +	Rated speed rpm : 1440
Tolerance mm : + 0.20	Tolerance 1/min : + 15
+	
Rated speed rpm : 300 +	rack travel mm : 0.50
guide sleeve +	Tolerance mm : + 0.50
travel mm : 1.40 +	Rated speed rpm : 1550
Tolerance mm : + 0.20 +	
+	
Rated speed rpm : 1350 +	
guide sleeve +	LOW IDLE
travel mm : 8.70	
Tolerance mm : + 0.10 +	
<u> </u>	control lever
Rated speed rpm : 500 +	position degree : 70.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 3.00 +	
Tolerance mm : + 0.30 +	Testing:
+	
+	Rated speed rpm : 300
GUIDE SLEEVE POSITION +	rack travel mm : 7.90 Tolerance mm : + 0.10
<u></u>	Tolerance mm : + 0.10
Rated speed rpm : 1350 +	
+	Rated speed rpm : 100
Rack travel in mm: 16.50	
Tolerance mm : + 1.30 +	CRT mm min. :> 9.50
+	
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
+ ·	
Rated speed rpm : 1300 +	Rated speed rpm : 1300
+	rack travel mm : 11.05

Tolerance mm	: + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.95 : ← 0.15
Rated speed rpm rack travel mm Tolerance mm	: 585 : 12.10 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.10 : + 0.10
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 230
Check speed 1/min	: > 80
Check speed 1/min	: < 250
Aneroid pressure hPa Rated speed rpm Del. quantity	
cm3/1000 strokes Tolerance	: 75.0
cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000S. Spreed Tolerance	: +- 4.0
cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 7.0
Aneroid pressure	
hPa Rated speed rpm Del. quantity	585
cm3/1000 strokes Tolerance	: 69.0
cm3/1000 strokes	: ← 1.5
Check tolerance cm3/1000s.	: + 4.0
BREAKAWAY	

Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. 8.0 : +-LOW IDLE Rated speed rpm : 300 7.90 rack travel mm : Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

End of test specification sheet

Rack travel in mm: 10.00 Rated speed rpm: 1345

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.95 Test oil : ISO 4113

Combination No. : 0 403 446 249

Injection pump

Pump designation : PES6MW100/720RS1197

EP type number : 0 413 406 185

Governor

Governer design. : RQV325...1350MW109K

Governer no. : 0 420 083 997

Cust. part No.

Customer-spec. information

Customer : IVECO-FIAT Motor : 8060.45.6000

Power KW : 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.05 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1350

Rack travel in mm : 14.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 102.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 3.0

Spreed

Tolerance

	+	Tolerance mm : + 0.50
Check tolerance	+	
cm3/1000s.	: 6.0	GUIDE SLEEVE POSITION
Rated speed rpm	: 325	
Bush Austral to an	7.00	Rated speed rpm : 1475
Rack travel in mm		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Tolerance mm	: + 0.20 +	Rack travel in mm: 13.00
Del. quantity	1	Tolerance mm : + 2.00
cm3/1000 strokes	: 27.0	
Tolerance	+	
cm3/1000 strokes	: +- 2.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	†	
cm3/1000s.	: + 4.5 +	Rated speed rpm : 1350
Spreed	+	Aneroid pressure
Tolerance	+	hPa : 850
cm3/1000 strokes	: 3.5	Del. quantity
Check tolerance	+	cm3/1000 strokes : 102.0
cm3/1000s.	: 5.5	Tolerance
	+	cm3/1000 strokes : + 1.0
	<u> </u>	Check tolerance
(B) SETTING OF IN	JECTION PUMP +	cm3/1000s. : + 3.0
WITH GOVERNOR	+	Spreed
	+	Tolerance
	+	cm3/1000 strokes : 3.5
GUIDE SLEEVE TRAV	EL +	Check tolerance
	+	cm3/1000s. : 6.0
Rated speed rpm	: 325	
guide sleeve	+	
travel mm	: 1.90	
Tolerance mm	: + 0.25 +	CONTROL LEVER
	†	
Rated speed rpm	: 1411 +	control lever
guide sleeve	+	position degree : 120.0
travel mm	: 10.31	tolerance degree : +- 4.0
Tolerance mm	: ← 0.25 +	
	+	RATED SPEED
Rated speed rpm	: 832	47.05
guide sleeve	t	rack travel mm : 13.00
travel mm	: 5.05	Rated speed rpm : 1425
Tolerance mm	: + 0.25	Tolerance $1/\min$: $+-$ 5
maked massel	†	mode dunied ma
Rated speed rpm	: 346	rack travel mm : 4.00
guide sleeve	. 2.77	Rated speed rpm : 1535
travel mm	: 2.27	Tolerance 1/min : + 15
Tolerance mm	: + 0.25	mode Annual am a 0.50
Data da massal man	70/	rack travel mm : 0.50
Rated speed rpm	: 396	Tolerance mm : + 0.50 Rated speed rpm : 1650
guide sleeve	. 7.47	Rated speed rpm : 1650
travel mm	: 3.13	
Tolerance mm	: ← 0.25	
Data d amend were	. 700	LOW IDLE
Rated speed rpm	: 380	LOM IDEE
guide steeve	. 301	
travel mm	3.01	control lever
Tolerance mm	: +- 0.25	
Dada al amand	1440	position degree : 82.0
Rated speed rpm	: 1640	tolerance degree : +- 4.0
guide sleeve	. 17 50	Tooting
travel mm	: 13.50 +	Testing:

		+ Rated speed rpm	: > 265
Rated speed rpm		+	
rack travel mm		+ Check	
Tolerance mm	: + 0.10	→ speed 1/min	: > 275
		+	
Rated speed rpm	: 200		
		+ FUEL DELIVERY CHA	RACTERISTICS
CRT mm min.	: > 10.00	+	
		+ Aneroid pressure	
			: 850
TORQUE CONTROL		+ Rated speed rpm	: 1200
		→ Del. quantity	
Rated speed rpm	: 1350	+ cm3/1000 strokes	: 102.0
rack travel mm	: 14.05	+ Tolerance	
Tolerance mm		+ cm3/1000 strokes	: +- 1.5
		- Check tolerance	
Rated speed rpm	: 1200	+ cm3/1000s.	: +- 4.0
rack travel mm		Spreed	
Tolerance mm		Tolerance	
1000 41,00 11,11		+ cm3/1000 strokes	: 5.0
Rated speed rpm	: 1000	Check tolerance	. 5.0
rack travel mm		cm3/1000s.	: 7.0
Tolerance mm		1 (110)	. 7.0
roter artice min	0.15	Aneroid pressure	
Pated speed pop	: 700	hPa	: 850
Rated speed rpm rack travel mm		Rated speed rpm	
			: 1000
Tolerance mm	: +- 0.10	Del. quantity	. 407.0
		- cm3/1000 strokes	: 103.0
4150010 (11 777107		Tolerance	4.5
ANEROID/ALTITUDE		+ cm3/1000 strokes	: + 1.5
COMPENSATOR TEST		+ Check tolerance	
		+ cm3/1000s.	: +- 4.0
		†	
SETTING		+ Aneroid pressure	0.50
	500	+ hPa	: 850
Rated speed rpm		+ Rated speed rpm	: 700
Pressure hPa		+ Del. quantity	
rack travel mm		+ cm3/1000 strokes	: 104.0
Tolerance mm	: ← 0.10	+ Tolerance	
		+ cm3/1000 strokes	: + 1.5
MEASUREMENT		+ Check tolerance	
		+ cm3/1000s.	: +- 4.0
Pressure hPa	: -	+	
Rated speed rpm	: 500	+ Aneroid pressure	
rack travel mm	: 11.05	+ hPa	-
Tolerance mm	: +- 0.05	+ Rated speed rpm	: 500
		+ Del. quantity	
Rated speed rpm	: 500	+ cm3/1000 strokes	: 75.0
·		+ Tolerance	
Pressure hPa	: 550	cm3/1000 strokes	: + 1.0
rack travel mm	: 12.95	+ Check tolerance	
Tolerance mm	: + 0.15	- cm3/1000s.	:
		+	
Pressure hPa	: 350	 	
rack travel mm	: 12.00	BREAKAWAY	
Tolerance mm	: +- 0.05	+	
- wyw. Milyw Hell		1	
	,	Rack travel in mm	: 13.00
START CUT-OUT		Rated speed rpm	
JIANI GOI GOI		Tolerance 1/min	: +- 5
		1 TOCCE GITTLE TABLET	• • •

STARTING FUEL DELIVERY

Rated speed rpm 100

WARM-START DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 65.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : + 13.0

COLD-START DELIVERY

100 Rated speed rpm

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : +-8.0

Check tolerance cm3/1000s.

: + 10.0

LOW IDLE

Rated speed rpm 325 7.80 rack travel mm Tolerance mm 0.20

Del. quantity

cm3/1000 strokes : 27.0

Tolerance

cm3/1000 strokes 2.0

Check tolerance

cm3/1000s. 4.5

Spreed Tolerance

3.5 cm3/1000 strokes :

Check tolerance

5.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 08.06.95 Edition Test oil : ISO 4113

Combination No. : 0 403 446 280

Injection pump

Pump designation : PES6MW100/720RS1131

: -1

EP type number : 0 413 406 165

Governor

Governer design. : RQV300...1300MW50

: -19

: 0 420 083 245 Governer no.

Cust. part No. : 0210742202

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

: 3.65 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 13.15 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed

Tolerance	+ guide sleeve
cm3/1000 strokes : 3.5	+ travel mm : 10.00
	+ Tolerance mm : + 0.25
Check tolerance	+
cm3/1000s. : 6.0	+ Rated speed rpm : 1620
	+ guide sleeve
Rated speed rpm : 300	+ travel mm : 11.50
	+ Tolerance mm : + 0.50
Rack travel in mm: 6.50	1
Tolerance mm : + 0.10	
Del. quantity	→ GUIDE SLEEVE POSITION
cm3/1000 strokes : 12.0	40200 020000 1 00212014
Tolerance	Rated speed rpm : 1350
cm3/1000 strokes : +- 2.0	Thatea speed ipin . 1999
Check tolerance	Rack travel in mm: 16.50
cm3/1000s. : + 4.5	+ Tolerance mm : + 1.30
Spreed	1 Total direct man 1.30
Tolerance	
cm3/1000 strokes : 3.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	T TOLL LOAD DELIVERY AT FOLK LOAD STOP
cm3/1000s. : 5.5	Rated speed rpm : 1300
tm5/19005. : 5.5	The second secon
	+ Aneroid pressure + hPa : 1000
(B) SETTING OF INJECTION PUMP	
	+ Del. quantity + cm3/1000 strokes : 100.0
WITH GOVERNOR	
	+ Tolerance
AUTAE ALEBUT TABLE	- + cm3/1000 strokes : +- 1.0
GUIDE SLEEVE TRAVEL	+ Check tolerance
700	+ cm3/1000s. : $+$ 3.0
Rated speed rpm : 300	+ Spreed
guide sleeve	+ Tolerance
travel mm : 0.92	+ cm3/1000 strokes : 3.5
Tolerance mm : + 0.25	+ Check tolerance
	+ cm3/1000s. : 6.0
Rated speed rpm : 1360	+
guide sleeve	+
travel mm : 8.64	
Tolerance mm : + 0.25	+ CONTROL LEVER
	+
Rated speed rpm : 2240	+ control lever
guide sleeve	+ position degree : 118.0
travel mm : 24.82	tolerance degree : +- 4.0
Tolerance mm : + 0.25	+
	+ RATED SPEED
Rated speed rpm : 721	+
guide sleeve	† rack travel mm : 12.10
travel mm : 5.69	+ Rated speed rpm : 1350
Tolerance mm : + 0.25	+ Tolerance 1/min : + 5
	+
Rated speed rpm : 771	rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1475
travel mm : 6.11	+ Tolerance 1/min : + 15
Tolerance mm : + 0.25	+
	frack travel mm : 0.50
Rated speed rpm : 1050	+ Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1600
travel mm : 7.14	1.000
Tolerance mm : + 0.25	1
roceration in O.L.	
Rated speed rpm : 1485	LOW IDLE
rated sheen thus . 1402	TOW TOUR

		+ Rated speed rpm : < 220
		traced speed (piii . 1 220
control lever		Check
position degree		+ speed 1/min : > 80
tolerance degree	: +- 4.0	+ Check + speed 1/min : < 240
Testing:		+ speed 1/min : < 240
100011191		
Rated speed rpm	: 300	+ FUEL DELIVERY CHARACTERISTICS
rack travel mm		† Amanaid manager
Tolerance mm	: ← 0.10	+ Aneroid pressure + hPa : 1000
Rated speed rpm	: 200	Rated speed rpm : 750
		+ Del. quantity
CRT mm min.	: > 8.00	+ cm3/1000 strokes : 92.0
		+ Tolerance
TORQUE CONTROL		
TORGUE CONTROL		+ cm3/1000s. : + 4.0
Rated speed rpm	: 1300	Spreed
rack travel mm Tolerance mm	: 13.15	+ Tolerance
Tolerance mm	: + 0.05	+ cm3/1000 strokes : 5.0
Rated speed rpm	: 750	theck tolerance cm3/1000s. : 7.0
rack travel mm	: 13.15	1 10000
Tolerance mm		+ Aneroid pressure
		+ hPa : -
ANIFOOTO /AL TITUOS		Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 43.0
CON BIOATON TEOT		+ Tolerance
		+ cm3/1000 strokes : + 1.0
SETTING		+ Check tolerance
Rated speed rpm	: 500	+ cm3/1000s. : +- 3.0
Pressure hPa	: 1000	
rack travel mm	: 13.15	+ BREAKAWAY
Tolerance mm	: +- 0.10	†
MEASUREMENT		Rack travel in mm: 12.10
PIEMOUREPIEM		Rated speed rpm : 1350
Pressure hPa	:	+ Tolerance 1/min : + 5
Rated speed rpm	: 500	†
rack travel mm Tolerance mm	: 10.55 : + 0.05	†
ioterance iimi	. +- 0.05	T STARTING FUEL DELIVERY
Rated speed rpm	: 500	+
2	770	Rated speed rpm : 100
Pressure hPa rack travel mm	: 350 : 12.55	+ Del. quantity + cm3/1000 strokes : 105.0
Tolerance mm	: + 0.15	Tolerance
70001 01100 11111	• • • • • • • • • • • • • • • • • • • •	+ cm3/1000 strokes : + 5.0
Pressure hPa	: 200	+ Check tolerance
rack travel mm	: 11.25	+ cm3/1000s. : + 8.0
Tolerance mm	: ← 0.05	Ī
		 ‡
START CUT-OUT		
Data d amazal ana	. \ 100	+ LOW IDLE
Rated speed rpm	: > 100	τ

Rated speed rpm	:		300
rack travel mm	:		6.50
Tolerance mm	:	+-	0.10
Del. quantity			
cm3/1000 strokes	:		12.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000S.	:	+-	4.5
Spreed			
Tolerance			
cm3/1000 strokes	:		3.5
Check tolerance			
cm3/1000s.	:		5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.07.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 446 303

Injection pump

Pump designation : PES6MW100/720RS1131

: -1

EP type number : 0 413 406 165

Governor

Governer design. : RQV300...1300MW50

: -25

: 0 420 083 271 Governer no.

Cust. part No. : 0220745302

Customer-spec. information Customer : MB-NFZ Motor : 0M366LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.65 Tolerance mm : + 0.05Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 12.95

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : +-

1.0

Check tolerance cm3/1000s.

3.0 : +-

Spreed

Tolerance cm3/1000 strokes : 3.5 Check tolerance	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
cm3/1000s. : 6.0	GUIDE SLEEVE POSITION
Rated speed rpm : 300	Rated speed rpm : 1400
Rack travel in mm: 7.15 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 12.0 Tolerance	Rack travel in mm : 10.00 Tolerance mm : + 2.00
cm3/1000 strokes : + 2.0 + Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : + 4.5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 +	Rated speed rpm : 1300 Aneroid pressure hPa : 1000
cm3/1000 strokes : 3.5 + Check tolerance +	Del. quantity cm3/1000 strokes : 96.0
cm3/1000s. : 5.5	Tolerance cm3/1000 strokes : + 1.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm : 300	cm3/1000s. : 6.0
guide sleeve	
travel mm : 1.40 + Tolerance mm : + 0.25 +	CONTROL LEVER
Rated speed rpm : 1354 guide sleeve travel mm : 8.68 Tolerance mm : + 0.25	control lever position degree : 113.0 tolerance degree : + 4.0
Rated speed rpm : 881	RATED SPEED rack travel mm : 11.95
guide sleeve travel mm : 5.02	Rated speed rpm : 1345
Tolerance mm : + 0.25	Tolerance 1/min : +- 5
Rated speed rpm : 363 guide sleeve travel mm : 2.05	rack travel mm : 4.00 Rated speed rpm : 1470 Tolerance 1/min : +- 15
Tolerance mm : + 0.25	rack travel mm : 0.50
Rates % peed rpm : 413 guide sleeve	Tolerance mm : +- 0.50 Rated speed rpm : 1550
travel mm : 2.44 Tolerance mm : + 0.25	
Rated speed rpm : 500 guide sleeve	LOW IDLE
travel mm : 2.99 Tolerance mm : +- 0.25	control lever
Rated speed rpm : 1600 +	position degree : 80.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm	:		300
rack travel mm	:		7.15
Tolerance mm	:	+-	0.10

Rated speed rpm : 200

CRT mm min. :> 8.20

TORQUE CONTROL

Rated speed rpm	:	1300
rack travel mm	:	12.95
Tolerance mm	:	+- 0.05

Rated speed rpm : 750 rack travel mm 12.95 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1000
rack travel mm	•	12.95
Tolerance mm	:	+- 0.05

MEASUREMENT

Pressure hPa	:	***
Rated speed rpm	:	500
Tolerance mm	· ·	-0.05

Rated speed rpm : 500

350 Pressure hPa • 1.70 rack travel mm : + 0.15Tolerance mm

200 Pressure hPa rack travel mm : 0.40 Tolerance mm : ← 0.05

START CUT-OUT

Pated	speed	PPM		>	100
Nateu	speed	Pall	•		100
Rated	speed	rpm	:	<	220

Check

speed 1/min : > 80

Check

speed 1/min 240 : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1000 hPa Rated speed rpm : 750 Del. quantity

cm3/1000 strokes : 86.0 Tolerance

cm3/1000 strokes : +- 2.0 Check toLerance

4.0

cm3/1000s. Spreed

Tolerance cm3/1000 strokes : 5.0 Check tolerance

cm3/1000s. 7.0

Aneroid pressure

Rated speed rpm 500

Del. quantity cm3/1000 strokes : 42.0 Tolerance

cm3/1000 strokes : + 1.0 Check tolerance

cm3/1000s. : +-3.0

BREAKAWAY

Rack travel in mm: 11.95 Rated speed rpm : 1345 Tolerance 1/min : +

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes :

105.0

Tolerance

5.0 cm3/1000 strokes : +-Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 300 rack travel mm 7.15 : +- 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 12.0

Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance	• 4	4.5
cm3/1000s. Spreed	• +-	4.5
Tolerance cm3/1000 strokes	•	3.5
Check tolerance		
cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.06.95 Test oil : ISO 4113

Combination No. : 0 403 446 319

Injection pump

Pump designation : PES6MW100/320RS1216

: -1

EP type number : 0 413 406 223

Governor

Governer design. : RQV275...1250MW124K

Governer no. : 0 420 083 989

Cust. part No. :

Customer-spec. information

Customer : RVI

: MIDR 060226 U Motor

: 110.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 033

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar 1.5

Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0 x inside diameter : 2.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm 4.25 : + - 0.05Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 13.00 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + 0.50Tolerance

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no.

BASIC SETTING

1250 Rated speed rpm :

Rack travel in mm: 13.25

Rack travel in mm: 13.25 Tolerance mm : + 0.05

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 106.0

Tolerance

cm3/1000 strokes : +- 1.0

Charle del carre	
Check tolerance cm3/1000s. : +- 3.0	travel mm : 3.92 Tolerance mm : +- 0.25
Spreed	Rated speed rpm : 1650
Tolerance -	guide sleeve
cm3/1000 strokes : 3.5 -	- travel mm : 13.50
	Tolerance mm : +- 0.50
Check tolerance	-
cm3/1000s. : 6.0	
	GUIDE SLEEVE POSITION
Rated speed rpm : 275	
	- Rated speed rpm : 1350
Rack travel in mm: -7.20	Lacea opeca i piii i 1030
Tolerance mm : +- 0.20	Rack travel in mm : 16.50
Del. quantity	Tolerance mm : + 1.30
cm3/1000 strokes : 21.0 -	
Tolerance	
cm3/1000 strokes : +- 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	
cm3/1000s. : +- 4.5	- Rated speed rpm : 1250
Spreed	- Aneroid pressure
Tolerance	h hPa : -
cm3/1000 strokes : 3.5	Del. quantity
Check tolerance	- cm3/1000 strokes : 106.0
cm3/1000s. : 5.0 -	- Tolerance
+	- cm3/1000 strokes : + 1.0
+	- Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : +- 3.0
	- Spreed
WITH GOVERNOR	- Spreed
	- Tolerance
WITH GOVERNOR	Tolerance cm3/1000 strokes : 3.5
	Tolerance - cm3/1000 strokes : 3.5 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL	Tolerance cm3/1000 strokes : 3.5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275	Tolerance - cm3/1000 strokes : 3.5 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve	Tolerance - cm3/1000 strokes : 3.5 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve	Tolerance - cm3/1000 strokes : 3.5 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 9.99 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 9.99 Tolerance mm : 9.99 Tolerance mm : 9.99	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve travel mm : 390 guide sleeve travel mm : 2.39	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide steeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide steeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide steeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide steeve travel mm : 2.39 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -12.70
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve travel mm : 390 guide sleeve travel mm : 2.39	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -1.70 Tolerance mm : -12.70 Tolerance mm : -12.70 Tolerance mm : + 0.50
GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve travel mm : 2.39 Tolerance mm : + 0.25 Rated speed rpm : 2.39 Tolerance mm : + 0.25	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -1.70 Tolerance mm : -12.70 Tolerance mm : -12.70 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : 40.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : 40.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : 40.25 Rated speed rpm : 390 guide sleeve travel mm : 2.39 Tolerance mm : 40.25 Rated speed rpm : 440 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -1.70 Tolerance 1/min : + 5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve travel mm : 2.39 Tolerance mm : + 0.25 Rated speed rpm : 2.39 Tolerance mm : + 0.25 Rated speed rpm : 2.39 Tolerance mm : 2.39 Tolerance mm : 440 guide sleeve travel mm : 3.01	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -1.70 Tolerance mm : -12.70 Tolerance mm : -12.70 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : 40.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : 40.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : 40.25 Rated speed rpm : 390 guide sleeve travel mm : 2.39 Tolerance mm : 40.25 Rated speed rpm : 440 guide sleeve	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -1.70 Tolerance mm : -12.70 Tolerance mm : -12.70 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.00 Tolerance mm : + 0.25 Rated speed rpm : 1344 guide sleeve travel mm : 9.99 Tolerance mm : + 0.25 Rated speed rpm : 924 guide sleeve travel mm : 6.77 Tolerance mm : + 0.25 Rated speed rpm : 390 guide sleeve travel mm : 2.39 Tolerance mm : + 0.25 Rated speed rpm : 2.39 Tolerance mm : + 0.25 Rated speed rpm : 2.39 Tolerance mm : 2.39 Tolerance mm : 440 guide sleeve travel mm : 3.01	Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0 CONTROL LEVER control lever position degree : 300.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1310 Tolerance 1/min : + 15 rack travel mm : -9.25 Rated speed rpm : 1465 Tolerance 1/min : + 5 rack travel mm : -1.70 Tolerance mm : -12.70 Tolerance mm : -12.70 Tolerance mm : + 0.50

	+ Tolerance
	+ cm3/1000 strokes : 5.0
control lever	+ Check tolerance
position degree : 245.0	+ cm3/1000s. : 7.0
tolerance degree : +- 4.0	+
	+ Aneroid pressure
Testing:	+ hPa : -
_	+ Rated speed rpm : 700
Rated speed rpm : 275	+ Del. quantity
rack travel mm : -7.20	+ cm3/1000 strokes : 57.0
Tolerance mm : + 0.20	+ Tolerance
	+ cm3/1000 strokes : +- 4.0
Rated speed rpm : 200	+ Check tolerance
•	+ cm3/1000s. : $+$ 7.5
CRT mm min. :> -6.60	1
	+ BREAKAWAY
TORQUE CONTROL	+
	+
Rated speed rpm : 1250	+ Rack travel in mm : -1.00
rack travel mm : 13.25	+ Rated speed rpm : 1310
rack travel mm : 13.25 Tolerance mm : + 0.05	+ Tolerance 1/min : + 15
	+
Rated speed rpm : 700	1
rack travel mm : -1.35	
Tolerance mm : + 0.05	+ STARTING FUEL DELIVERY
	-
Rated speed rpm : 700	+ Rated speed rpm : 100
rack travel mm : -4.50 Tolerance mm : +- 0.10	+ rack travel mm : 20.25
Tolerance mm : + 0.10	+ Tolerance mm : $+$ 0.75
	+ Del. quantity
Rated speed rpm : 350	+ cm3/1000 strokes : 95.0
rack travel mm : -2.40	+ Tolerance
Tolerance m : \div 0.40	+ cm3/1000 strokes : +- 10.0
	+ Check tolerance
	+ cm3/1000s. : + 13.0
	1
START CUT-OUT	1
	1
Rated speed rpm : > 150	
Rated speed rpm : < 230	+ LOW IDLE
	+
Check	Rated speed rpm : 275
speed 1/min : > 130	+ rack travel mm : -7.20
Check	+ Tolerance mm : + 0.20
speed 1/min : < .245	+ Del. quantity
	+ cm3/1000 strokes : 21.0
	→ Tolerance
FUEL DELIVERY CHARACTERISTICS	+ cm3/1000 strokes : $+$ 2.0
	+ Check tolerance
Aneroid pressure	+ cm3/1000s. : + 4.5
hPa : -	+ Spreed
Rated speed rpm : 700	+ Tolerance
Del. quantity	+ cm3/1000 strokes : 3.5
cm3/1000 strokes : 93.5	+ Check tolerance
Tolerance	+ cm3/1000s. : 5.0
cm3/1000 strokes : + 1.5	+
Check tolerance	+
cm3/1000s. : +- 4.0	+
Spreed	+
•	-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.06.95 Test oil : ISO 4113

Combination No. : 0 403 474 016

Injection pump

Pump designation : PES4MW100/720RS1212

EP type number : 0 413 404 114

Governor

Governer design. : RSV350...1300MW0A346

Governer no. : 0 420 085 175

Cust. part No.

Customer—spec. information
Customer : MB-NFZ
Motor : OM364LA
Power KW : 102.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check

tolerance 'NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.25
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 104.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : + 3.0

Spreed

Tolerance

Check tolerance	+ tolerance degree : + 4.0
cm3/1000s. : 6.0	+
Rated speed rpm : 350	RATED SPEED
	rack travel mm : 1.00
Rack travel in mm: 6.40	Tolerance mm : + 0.70
Tolerance mm : + 0.40 Del. quantity	Rated speed rpm : 1500
cm3/1000 strokes : 12.0	+ rack travel mm : 4.00
Tolerance	Rated speed rpm : 1425
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 12.20
cm3/1000s. : + 4.5	rack travel mm : 12.20 Rated speed rpm : 1353
Spreed	+ Tolerance 1/min : + 8
Tolerance : 3.5	+ ASSEMBLY GOVERNOR SETTING
Check tolerance	T ASSEMBLI GOVERNOR SETTING
cm3/1000s. : 5.5	Rated speed rpm : 1340 rack travel mm : 12.25
	rack travel mm : 12.25
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1384
WITH GOVERNOR	+ Tolerance 1/min : + 4
	rack travel mm : 4.00
	Rated speed rpm : 1341 rack travel mm : 12.25
GUIDE SLEEVE POSITION	rack travel mm : 12.25
Rated speed rpm : 800	Rated speed rpm : 1385
	+ Tolerance 1/min : +- 4
Rack travel in mm : 0.65 Tolerance mm : + 0.35	rack travel mm : 4.00
roterance um : + 0.33	Rated speed rpm : 1342
governor_spring	rack travel mm : 12.25
pre-tension click setting x : 4.00	+ Rated speed rpm : 1386
teria secting x . 4.00	+ Tolerance 1/min : + 4
FULL LOAD DELTUENWAY FULL LOAD OTOD	rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1343
Rated speed rpm : 1300	rack travel mm : 12.25
Aneroid pressure hPa : 700	+ Rated speed rpm : 1387
Del. quantity	+ Rated speed rpm : 1387 + Tolerance 1/min : + 4
cm3/1000 strokes : 104.0	rack travel mm : 4.00
Tolerance cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 1344
Check tolerance	rack travel mm : 12.25
cm3/1000s. : +- 3.0	4700
Spreed Tolerance	+ Rated speed rpm : 1388 + Tolerance 1/min : +- 4
cm3/1000 strokes : 3.5	rack travel mm : 4.00
Check tolerance cm3/1000s. : 6.0	+ Rated speed rpm : 1345
cm3/1000S. : 6.0	+ Rated speed rpm : 1345 + rack travel mm : 12.25
	+
CONTROL LEVER	Rated speed rpm : 1389 Tolerance 1/min : + 4
CONTINUE SEVEN	+ rack travel mm : 4.00
control lever	†
position degree : 108.0	T

LOW IDLE

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 6.40

Testing:

rack travel mm : 2.00
Rated speed rpm : 460
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1300 rack travel mm : 13.25 Tolerance mm : + 0.05

Rated speed rpm : 600 rack travel mm : 13.25 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 13.25
Tolerance mm : +- 0.10

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
Tolerance mm : + 0.05

Rated speed rpm : 500

Pressure hPa : 400 rack travel mm : 2.55 Tolerance mm : + 0.10

Pressure hPa : 200 rack travel mm : 0.85 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 700 Rated speed rpm 600 Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 7.0 Aneroid pressure

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 37.0
Tolerance
cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 90.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW IDLE

Rated speed rom 350 rack travel mm 6.40 Tolerance mm : + 0.40Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5

cm3/1000s.	:	5.5	
****	·	······································	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.04.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 476 027

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governer design. : RSV350...1300MW0A316

: -6

: 0 420 085 098 Governer no.

Cust. part No. :

Customer-spec. information Customer : MB-NFZ Motor : OM366A Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : ← 1.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

tolerance mm

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm 3.75 Tolerance mm : + 0.05Check

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: + 0.10

: +- 0.50 Tolerance

Check

: + 0.75tolerance "NW

BASIC SETTING

1300 Rated speed rpm :

Rack travel in mm: 10.75 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 73.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : ← 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

J03

	1
Check tolerance cm3/1000s. : 6.0	control lever position degree : 110.0 tolerance degree : + 4.0
Rated speed rpm : 350	RATED SPEED
Rack travel in mm: 7.30 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 10.0 Tolerance	rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1450
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5	rack travel mm : 4.00 Rated speed rpm : 1415
Spreed Tolerance	rack travel mm : 9.70 Rated speed rpm : 1353
cm3/1000 strokes : 3.5 Check tolerance	Tolerance 1/min : + 8
cm3/1000s. : 5.5	ASSEMBLY GOVERNOR SETTING
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1340 rack travel mm : 9.70
	+ Rated speed rpm : 1384 + Tolerance 1/min : + 4 + rack travel mm : 4.00
GUIDE SLEEVE POSITION	+
Rated speed rpm : 800	+ Rated speed rpm : 1341 + rack travel mm : 9.70
Rack travel in mm : 0.65 Tolerance mm : + 0.35	Rated speed rpm : 1385 Tolerance 1/min : + 4 rack travel mm : 4.00
governor spring pre-tension click setting x : 4.00	Rated speed rpm : 1342 rack travel mm : 9.70
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1386 Tolerance 1/min : + 4 rack travel mm : 4.00
Rated speed rpm : 1300 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 1343 rack travel mm : 9.70
cm3/1000 strokes : 73.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1387 Tolerance 1/min : + 4 rack travel mm : 4.00
Check tolerance cm3/1000s. : + 3.0 Spreed	Rated speed rpm : 1344 rack travel mm : 9.70
Tolerance cm3/1000 strokes : 3.5 Check tolerance	Rated speed rpm : 1388 Tolerance 1/min : +- 4
cm3/1000s. : 6.0	rack travel mm : 4.00
CONTROL 1 EVER	Rated speed rpm : 1345 rack travel mm : 9.70
CONTROL LEVER	Rated speed rpm : 1389 Tolerance 1/min : + 4

rack travel mm	: 4.00	‡	Del. quantity cm3/1000 strokes	: 74.0
LOW IDLE		+	Tolerance cm3/1000 strokes	: + 1.5
Setting point w/d	out bumper spring	$\frac{1}{1}$	Check tolerance cm3/1000s.	: +- 4.0
Rated speed rpm rack travel mm		+		
Testing:		Ī	STARTING FUEL DEL	IVERY
rack travel mm Rated speed rpm Tolerance 1/min		1	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	
Rated speed rpm	: 100	· 1	cm3/1000 strokes Check tolerance	: + 5.0
CRT mm min.	: > 19.00	Ī	cm3/1000s.	: 8.0
TORQUE CONTROL		+		
Rated speed rpm rack travel mm Tolerance mm	: 10.75 : + 0.05	+++++++++++++++++++++++++++++++++++++++	LOW IDLE Rated speed rpm rack travel mm Tolerance mm	: 350 : 7.30 : + 0.30
rack travel mm Tolerance mm	: + 0.05	‡	Del. quantity cm3/1000 strokes	: 10.0
Rated speed rpm rack travel mm Tolerance mm		+++++++++++++++++++++++++++++++++++++++	Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 4.5
FUEL DELIVERY CHA	ARACTERISTICS		cm3/1000s.	: 5.5
Aneroid pressure hPa Rated speed rpm	: 700	+		
Del. quantity cm3/1000 strokes		1	End of test specif	fication sheet
Tolerance cm3/1000 strokes	: + 1.5	‡		
Check tolerance cm3/1000s. Spreed	: +- 4.0	‡		
Tolerance cm3/1000 strokes Check tolerance	: 5.0	‡		
cm3/1000s.	: 7.0	<u> </u>		
Aneroid pressure	: -	‡		
Rated speed rpm	: 825	<u>†</u>		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.04.95 Test oil : ISO 4113

Combination No. : 0 403 476 054

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governer design. : RSV350...1200MW0A316

: -7

Governer no. : 0 420 085 092

Cust. part No. : 0150747302

Customer-spec. information Customer : MB-NFZ Motor : OM366A Power KW : 115.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : ÷ 0.05
Check

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

: + 0.10

Phasing : 0-60-120-180-240 : -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

tolerance mm

Rated speed rpm : 1200

Rack travel in mm : 12.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 81.5

Tolerance cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

J06

		T	
Check tolerance cm3/1000s.	: 6.0	+ control lever	. 407.0
CIID/TUUUS.	: 6.0	<pre>position degree tolerance degree</pre>	
Rated speed rpm	: 350	+	
		+ RATED SPEED	
Rack travel in mm		† , , ,	4 00
Tolerance mm	: ← 0.30	+ rack travel mm	: 1.00 : + 0.70
Del. quantity	. 40.0	† Tolerance mm	: +- 0.70
cm3/1000 strokes	: 10.0	+ Rated speed rpm	: 1450
Tolerance cm3/1000 strokes	· <u> </u>	T rack travel mm	: 4.00
Check tolerance	2.0	+ Rated speed rpm	
cm3/1000s.	: + 4.5	Nated opeca i piii	. 1540
Spreed		rack travel mm	: 11.00
Tolerance		+ Rated speed rpm	
cm3/1000 strokes	: 3.5	+ Tolerance 1/min	
Check tolerance		+	
cm3/1000s.	: 5.5	+ ASSEMBLY GOVERNO	R SETTING
		Rated speed rpm	: 1240
(B) SETTING OF INJ	ECTION PUMP	+ rack travel mm	
WITH GOVERNOR		1	
		Rated speed rpm	: 1289
		+ Tolerance 1/min	: +- 4
		+ rack travel mm	: 4.00
GUIDE SLEEVE POSIT	TION	+	40.4
	000	+ Rated speed rpm	
Rated speed rpm	: 800	+ rack travel mm	: 11.00
Rack travel in mm	: 0.65	+ Rated speed rpm	: 1290
Tolerance mm	: + 0.35	+ Tolerance 1/min	
		+ rack travel mm	: 4.00
governor spring		†	4010
pre-tension	7.00	+ Rated speed rpm	: 1242
click setting x	: 3.00	+ rack travel mm	: 11.00
		Rated speed rpm	: 1291
FULL LOAD DELTVERY	AT FULL LOAD STOP	+ Tolerance 1/min	
TOLL LOAD DELIVERT	AT TOLL LOAD STOP	rack travel mm	4.00
Rated speed rpm	: 1200	1 44000 11311	
Aneroid pressure		+ Rated speed rpm	: 1243
	: -	+ rack travel mm	
Del. quantity		+	
cm3/1000 strokes	: 81.5	+ Rated speed rpm	
Tolerance	. 40	+ Tolerance 1/min	
cm3/1000 strokes	: +- 1.0	† rack travel mm	: 4.00
Check tolerance	20	T Boated around mun	. 12//
cm3/1000s.	: + 3.0	+ Rated speed rpm + rack travel mm	
Spreed Tolerance		T rack travet and	. 11.00
cm3/1000 strokes	: 3.5	Rated speed rpm	: 1293
Check tolerance		+ Tolerance 1/min	
	: 6.0	+ rack travel mm	
		+	
		+ Rated speed rpm	
		† rack travel mm	: 11.00
CONTROL LEVER		† 5	4004
		+ Rated speed rpm	: 1294
		+ Tolerance 1/min	: +- 4

LOW IDLE	
Testing:	
Rated speed rpm	: 350
rack travel mm	
Tolerance mm	
rack travel mm	: 2.00
Rated speed rpm Tolerance 1/min	: 475 : + 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm	: 1200
rack travel mm	: 12.05
Tolerance mm	: ← 0.05
Rated speed rpm	: 750
rack travel mm	: 12.55 : +- 0.05
Tolerance mm	: +- 0.05
Rated speed rpm	: 1000
rack travel mm Tolerance mm	: 12.20 : + 0.10
FUEL DELIVERY CHA	
Aneroid pressure	
hPa Rated speed rpm	: - : 750
Del. quantity	
cm3/1000 strokes	: 76.5
Tolerance cm3/1000 strokes	: +- 1.5
Check tolerance	• ' 5• •
cm3/1000s.	: 4.0
Spreed	
Tolerance	: 5.0
~mZ/1000 a+mabaa	. ,,,,
cm3/1000 strokes Sheck tolerance	
cm3/1000 strokes Check tolerance cm3/1000s.	: 7.0

Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.00 : + 1.00 : 83.0 : + 5.0 : + 8.0
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 350 : 7.30 : ← 0.30 : 10.0 : ← 2.0 : ← 4.5 : 3.5 : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.04.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 476 055

Injection pump

Pump designation : PES6MW100/720RS1144 EP type number : 0 413 406 138

Governor

Governer design. : RSV350...1200MWGA316

: -8

Governer no. : 0 420 085 097

Cust. part No. :

Customer-spec. information Customer : MB-NFZ Motor : 0M366A Power KW : 92.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 047

1.5 Inlet press. bar :

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 1.0 Tolerance bar : +-

Prestroke mm 3.75 : + 0.05Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

9.85 Rack travel in mm : Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes: 63.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

		T		
Check tolerance cm3/1000s.	6.0	control le	degree :	102.0
Dahad award www.	750	+ tolerance	degree :	← 4.0
Rated speed rpm :	: 330	T RATED SPEE	:n	
Rack travel in mm :	6.60	T MAILO OILL	.0	
Tolerance mm :	+ 0.30	rack trave	elmm:	1.00
Del. quantity		+ Tolerance		- 0.70
cm3/1000 strokes :	10.0	+ Rated spee	d rpm :	1450
Tolerance cm3/1000 strokes :	+ 2.0	T rack trave	. mm	4.00
Check tolerance	2.0	+ Rated spee		1315
cm3/1000s.	4.5	+		
Spreed		rack trave		8.80
Tolerance	7 5	+ Rated spee		1253
cm3/1000 strokes : Check tolerance	3.5	† Tolerance	יי מוחות : -	- 8
cm3/1000s. :	5.5	ASSEMBLY G	OVERNOR SET	FTING
		Rated spee	ed rom :	1235
(B) SETTING OF INJE	CTION PUMP	rack trave		8.80
WITH GOVERNOR		+		
		Rated spee		
		+ Tolerance		
GUIDE SLEEVE POSITI	ON	t rack trave	: Lmm	4.00
GOIDE SECEVE FOOTE	.014	T Rated spee	d rom :	1236
Rated speed rpm :	806	rack trave		8.80
Rack travel in mm :	0.65	T Rated spee	drpm :	1275
_	+- 0.35	+ Tolerance		
_		+ rack trave	Lmm :	4.00
governor spring		t nated and		4277
<pre>pre-tension click setting x :</pre>	4.00	+ Rated spee + rack trave	drpm :	1237 8.80
cerea secening x .	4.00	+ Tuck trute		0.00
		+ Rated spee		1276
FULL LOAD DELIVERY	AT FULL LOAD STOP	+ Tolerance		<u> </u>
Dated around non-	1200	+ rack trave	Lmm:	4.00
Rated speed rpm : Aneroid pressure	1200	T Rated spee	drom:	1238
•	-	+ rack trave		8.80
Del. quantity		+		
cm3/1000 strokes :	63.0	+ Rated spee		1277
Tolerance cm3/1000 strokes :	- 10	+ Tolerance + rack trave		- 4 4.00
Check tolerance	1.0	T rack trave	C HBH -	4.00
cm3/1000s. :	→ 3.0	Rated spee		1239
Spreed		+ rack trave		8.80
Tolerance	7 5	Dotted and	d non	1270
cm3/1000 strokes : Check tolerance	3.3	Rated speed Tolerance		1278 4
cm3/1000s. :	6.0	rack trave		4.00
•		+		
		+ Rated speed	d rpm :	1240 8.80
CONTROL LEVED		+ rack trave	tmm:	8.80
CONTROL LEVER		Rated speed	drpm :	1279
		+ Tolerance		- 4
		•		

LOW IDLE	
Testing:	
Rated speed rpm	: 350
rack travel mm	: 6.60
Tolerance mm	: +- 0.30
rack travel mm	
Rated speed rpm Tolerance 1/min	: 445 : +- 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm	: 1200
rack travel mm	: 9.85
Tolerance mm	: +- 0.05
Rated speed rpm	
rack travel mm	: 10.75 : + 0.05
Tolerance mm	: 0.05
Rated speed rpm	
rack travel mm Tolerance mm	: 10.20 : +- 0.10
FUEL DELIVERY CHA	
Aneroid pressure	
hPa	: -
Rated speed rpm Del. quantity	: 800
cm3/1000 strokes	: 62.0
Tolerance	
cm3/1000 strokes	: ← 1.5
Check tolerance cm3/1000s.	: + 4 ₋ 0
Spreed	• · · · · · · · · · · · · · · · · · · ·
folerance	5 5
cm3/1000 strokes	: 5.0
hack talaranaa	: 7.0
Check tolerance cm3/1000s.	. /.U

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	83.0
Tolerance cm3/1000 strokes	: +	- 5.0
Check tolerance cm3/1000s.	: +	- 8.0

LOW IDLE			
Rated speed rpm	:	350	
rack travel mm	:	6.60	
Tolerance mm	: +-	0.30	
Del. quantity			
cm3/1000 strokes	:	10.0	
Tolerance			
cm3/1000 strokes	: +-	2.0	
Check tolerance			
cm3/1000s.	: +-	4.5	
Spreed			
Tolerance			
cm3/1000 strokes	:	3.5	
Check tolerance			
cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.04.95 Test oil : ISO 4113

Combination No. : 0 403 476 056

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governer design. : RSV350...1200MW0A316

: -5

Governer no. : 0 420 085 090

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : 0M366A
Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 10.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 70.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

		+		
Check tolerance		· ‡	control lever	
cm3/1000s. :	6.0	1	position degree	: 102.0
		1	tolerance degree	
Rated speed rpm :	350	1	00001 2,100 dog. 00	• • • • • • • • • • • • • • • • • • • •
racca opeca i pii	330	1	RATED SPEED	
Rack travel in mm :	6 AO	1	KATED SPEED	
Tolonopoo mm	+ 0.30	T	nook trovol me	: 1.00
	- 0.30	Ť	rack travel mm	
Del. quantity	40.0	†	Tolerance mm	
cm3/1000 strokes :	10.0	+	Rated speed rpm	: 1450
Tolerance		+		
cm3/1000 strokes : -	+- 2.0	+	rack travel mm	: 4.00
Check tolerance		+	Rated speed rpm	: 4.00 : 1315
cm3/1000s. : -	 4.5	+		
Spreed		+	rack travel mm	: 9.20
Tolerance		1	Rated speed rpm	: 1248
cm3/1000 strokes :	3.5	· 1	Tolerance 1/min	
Check tolerance	0.5	1	Total and Thinks	
	5.0	T	ASSEMBLY GOVERNOR	CETTING
cm3/1000s. :	5.0	T	ASSEMBLI GOVERNOR	SELLTIAR
		†		40/0
•		t	Rated speed rpm	
(B) SETTING OF INJECT	TION PUMP	+	rack travel mm	: 9.20
WITH GOVERNOR		+		
		+	Rated speed rpm	: 1284
		+	Tolerance 1/min	: +- 4
		1	rack travel mm	
GUIDE SLEEVE POSITION	N	1		
00100 000010 10011101	•	1	Rated speed rpm	: 1241
Rated speed rpm :	800	\mathbf{I}	rack travel mm	
Rated Speed (pil)	000	T	rack cravet min	. 7.20
Rack travel in mm :	0.45	7	Batad anoad ana	: 1285
		T	Rated speed rpm	
Tolerance mm : 1	F U.35	Ť	Tolerance 1/min	
		†	rack travel mm	: 4.00
governor spring		+		
pre-tension		+	Rated speed rpm	: 1242
click setting x :	4.00	+	rack travel mm	9.20
		+		
		+	Rated speed rpm	: 1286
FULL LOAD DELIVERY AT	FULL LOAD STOP	+	Tolerance 1/min	
		1	rack travel mm	: 4.00
Rated speed rpm :	1200	1		
Aneroid pressure	1200	1	Rated speed rpm	: 1243
hPa :	_	1	rack travel mm	9.20
	-	T	i ack travet iiiii	. 7.20
Del. quantity	70.0	T	Datad amand man	. 4207
cm3/1000 strokes :	70.0	†	Rated speed rpm	: 1287
Tolerance		+	Tolerance 1/min	: +- 4
cm3/1000 strokes : +	⊢ 1.0	+	rack travel mm	: 4.00
Check tolerance		+		
cm3/1000s. : +	⊢ 3.0	+	Rated speed rpm	: 1244
Spreed		+	rack travel mm	: 9.20
Tolerance		1		
cm3/1000 strokes :	3.5	1	Rated speed rpm	: 1288
Check tolerance		1	Tolerance 1/min	: +- 4
cm3/1000s. :	6.0	1	rack travel mm	4.00
CIII.2/ 10003	0.0	I	I GUN LI GYEL HED	• 4.00
		T	Dated and	. 10/.5
		T	Rated speed rpm	: 1245
		T	rack travel mm	: 9.20
CONTROL LEVER		†		***
		+	Rated speed rpm	: 1289
		+	Tolerance 1/min	: +- 4

rack travel mm	: 4.00	
LOW IDLE		
Testing:		
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.40 : + 0.30	
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 445 : + 30	
Rated speed rpm	: 100	
CRT mm min.	: > 19.00	
TORQUE CONTROL		
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 10.25 : + 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.15 : ← 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.10 : ← 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 10.60 : + 0.10	
FUEL DELIVERY CHA	ARACTERISTICS	
Aneroid pressure hPa Rated speed rpm	: -	
Del. quantity cm3/1000 strokes	: 70.0	
Tolerance cm3/1000 strokes	: + 1.5	
Check tolerance cm3/1000s. Spreed	: +- 4.0	
Tolerance cm3/1000 strokes	: 5.0	
Check tolerance cm3/1000s.	: 7.0	

STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.00 : Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s. 8.0 LOW IDLE Rated speed rpm 350 rack travel mm 6.40 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000S.4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.06.95 Test oil : ISO 4113

Combination No. : 0 403 476 066

Injection pump

Pump designation : PES6MW100/720RS1130

EP type number : 0 413 406 122

Governor

Governer design. : RSV350...1300MW0A318

: -5

Governer no. : 0 420 085 100

Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 A
Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm : 11.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

	- Mari
Check tolerance cm3/1000s. : 6.0	control lever position degree : 109.0 tolerance degree : +- 4.0
Rated speed rpm : 350	+ RATED SPEED
Rack travel in mm : 8.00 Tolerance mm : + 0.25 Del. quantity cm3/1000 strokes : 11.0 Tolerance	rack travel mm : 10.00 Rated speed rpm : 1335 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed	rack travel mm : 4.00 Rated speed rpm : 1415 Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1560
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 79.0 tolerance degree : + 4.0
Rated speed rpm : 800	Testing:
Rack travel in mm: 0.65 Tolerance mm: : + 0.35	Rated speed rpm : 350 rack travel mm : 8.00 Tolerance mm : + 0.10
governor spring pre-tension click setting x : 4.00	rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1280 Aneroid pressure	CRT mm min. :> 19.00
hPa : - Del. quantity cm3/1000 strokes : 83.0	TORQUE CONTROL Rated speed rpm : 1280
Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0	Rated speed rpm : 1280 rack travel mm : 17.05 Tolerance mm : + 0.05
Spreed Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 750 rack travel mm : 11.05 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : 6.0	+ +
CONTROL LEVER	FUEL DELIVERY CHARACTERISTICS

Aneroid pressure End of test specification sheet Rated speed rpm 750 Del. quantity cm3/1000 strokes : 71.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. 4.0 Spreed

5.0

7.0

BREAKAWAY

Tolerance

cm3/1000 strokes :

Check tolerance cm3/1000s.

Rack travel in mm: 10.00 Rated speed rpm 1335 Tolerance 1/min

STARTING FUEL DELIVERY

100 Rated speed rpm Del. quantity cm3/1000 strokes :

83.0 Tolerance

cm3/1000 strokes : +-5.0

Check tolerance

cm3/1000s. 8.0

LOW IDLE

350 Rated speed rpm 8.00 rack travel mm Tolerance mm 0.25 Del. quantity

cm3/1000 strokes :

Tolerance 2.0 cm3/1000 strokes : +-

11.0

Check tolerance

cm3/1000s. : +-4.5

Spreed Tolerance

3.5 cm3/1000 strokes :

Check tolerance cm3/1000s. 5.5

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.04.95 Test oil : ISO 4113

Combination No. : 0 403 476 067

Injection pump

Pump designation : PES6MW100/720RS1131

EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1300MWOA2

Governer no. : 0 420 085 109

Cust. part No. :

Customer—spec. information Customer : MB—NFZ Motor : OM 366 LA Power KW : 150.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40 Tolerance *C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 12.65 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 101.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes	: 3.5	†	control lever position degree	: 98.0
Check tolerance cm3/1000s.	: 6.0	+	tolerance degree	
Rated speed rpm	: 350	‡	RATED SPEED	
Rack travel in mm Tolerance mm Del. quantity		+ + + +	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : +- 0.70 : 1600
cm3/1000 strokes Tolerance	: 11.0	‡	rack travel mm Rated speed rpm	: 4.00 : 1435
cm3/1000 strokes Check tolerance	: + 2.0	Ì	rack travel mm	: 11.60
cm3/1000s. Spreed Tolerance	: - 4.5	1	Rated speed rpm Tolerance 1/min	: 1343
cm3/1000 strokes Check tolerance	: 3.5	1	ASSEMBLY GOVERNOR	SETTING
cm3/1000s.	: 5.5	+	Rated speed rpm rack travel mm	
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	+	Rated speed rpm Tolerance 1/min rack travel mm	: 1391 : + 4 : 4.00
GUIDE SLEEVE POSI	TTON	Ì	Rated speed rpm rack travel mm	: 1341 : 11.60
Rated speed rpm		1	Rated speed rpm	
Rack travel in mm		Ŧ	Tolerance 1/min rack travel mm	
governor spring	0.33	Ŧ	Rated speed rpm rack travel mm	: 1342 : 11.60
pre-tension click setting x	: 5.75	+	Rated speed rpm Tolerance 1/min rack travel mm	: 1393
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Ŧ		: 1343
Rated speed rpm Aneroid pressure	: 1300	Ī	Rated speed rpm rack travel mm	: 11.60
hPa Del. quantity	: 1000	Ŧ	Rated speed rpm Tolerance 1/min	: 1394
cm3/1000 strokes Tolerance	: 101.0	Ŧ	rack travel mm	4.00
cm3/1000 strokes Check tolerance	: + 1.0	Ī	Rated speed rpm rack travel mm	: 1344 : 11.60
cm3/1000s. Spreed	: + 3.0	+	Rated speed rpm	: 1395
Tolerance cm3/1000 strokes	: 3.5	‡	Tolerance 1/min rack travel mm	: + 4
Check tolerance cm3/1000s.	: 6.0	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm rack travel mm	: 1345 : 11.60
CONTROL LEVER		+	Rated speed rpm Tolerance 1/min	: 1396 : + 4

rack travel mma	: 4.00
LOW IDLE	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.55 : ← 0.35
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 450 : ← 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 12.65 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.65 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 12.65 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : +- 0.05
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 400 : 1.48 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 250 : 0.50 : + 0.10

FUEL DELIVERY CHARACTERISTICS			
Aneroid pressure			
hPa	: 1000		
Rated speed rpm	: 600		
Del. quantity			
cm3/1000 strokes	: 88.0		
Tolerance			
cm3/1000 strokes	: + 1.5		
Check tolerance			
cm3/1000s.	: +- 4.0		
Spreed Tolerance			
cm3/1000 strokes	: 5.0		
Check tolerance	. 5.0		
cm3/1000s.	: 7.0		
Aneroid pressure			
hPa	© #		
Rated speed rpm	: 500		
Del. quantity	F. 5		
cm3/1000 strokes	: 54.0		
Tolerance cm3/1000 strokes	: + 1.0		
Check tolerance	: +- 1.0		
cm3/1000s.	: 3.0		
oner lever			
STARTING FUEL DEL	TVEDY		
DIVINITIAG LOFF DEF	-L V I I \ I		

DINKITING LOEF DEF	TACKE	
Rated speed rpm Del. quantity	:	100
cm3/1000 strokes Tolerance	:	88.0
cm3/1000 strokes Check tolerance	: +-	5.0
cm3/1000s.	: +	8.0

LOW IDLE			
Rated speed rpm	:		350
rack travel mm	:		6.55
Tolerance mm	: .	+	0.35
Del. quantity			
cm3/1000 strokes	:		11.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance	•		
cm3/1000s.	:	+	4.5
Spreed	•		
Tolerance			
cm3/1000 strokes			7 5
CHO/ FULL Strokes	-		3.5

cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.04.95 Test oil : ISO 4113

Combination No. : 0 403 476 077

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governor design. : RSV350...1300MW0A3

Governer no. : 0 420 085 126

Cust. part No.

Customer—spec. information Customer : MB-NFZ Motor : OM 366 LA Power KW : 127.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 11.65

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 82.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

		1			
Check tolerance cm3/1000s.	: 6.0	+ po	ntrol lever sition degree lerance degree		 .0
Rated speed rpm	: 350	+	TED SPEED	• • •	••
Rack travel in mm		+		. 4	00
Tolerance mm Del. quantity cm3/1000 strokes	: + 0.35 : 11.0	 To	ck travel mm lerance mm ted speed rpm	: 1. : +- 0. : 1550	70
Tolerance		+			
cm3/1000 strokes Check tolerance			ck travel mm ted speed rpm	: 4. : 1445	UU
cm3/1000s. Spreed	: +- 4.5	† ra	ck travel mm	: 10.	60
Tolerance			ted speed rpm		
cm3/1000 strokes Check tolerance	: 3.5		lerance 1/min		8
cm3/1000s.	: 5.0	AS:	SEMBLY GOVERNOR	SETTING	
		I Ra	ted speed rpm	: 134	U
(B) SETTING OF INJ	ECTION PUMP		ck travel mm		
WITH GOVERNOR		I pa	ted speed rpm	: 140	1
			lerance 1/min		
			ck travel mm	: 4.	
GUIDE SLEEVE POSIT	TION	1	on craves man	• •••	-
			ted speed rpm		
Rated speed rpm	: 800	+ rai	ck travel mm	: 10.	60
Rack travel in mm	: 0.65	Rat	ted speed rpm	: 140	2
Tolerance mm	: +- 0.35		lerance 1/min		4
		₹	ck travel mm	: 4.1	00
governor spring		+ _			_
pre-tension			ted speed rpm	: 134	
click setting x	: 4.20	† rac	ck travel mm	: 10.	50
			ted speed rpm	: 140	3
FULL LOAD DELIVERY	AT FULL LOAD STOP		lerance 1/min	•	4
	4700	+ rad	ck travel mm	: 4.0	J0
Rated speed rpm	: 1300	† 5-		. 47/	7
Aneroid pressure hPa	• -		ted speed rpm ck travel mm	: 1343	
Del. quantity	•	I	K CLAVEC HILL	. 10.0	<i>J</i> U
cm3/1000 strokes	: 82.0	∔ Rat	ted speed rpm	: 1404	4
Tolerance			lerance 1/min	: +- 4	
cm3/1000 strokes	: ← 1.0		ck travel mm	: 4.0	00
Check tolerance		+			
cm3/1000s.	: 3.0		ed speed rpm	: 134	
Spreed		+ rac	ck travel mm	: 10.6	50
Tolerance	. 75	†		. 4/01	-
	: 3.5		ted speed rpm Lerance 1/min	: + 1405) '4
Check tolerance cm3/1000s.	: 6.0		ck travel mm	: 4.0	
CIIID/ TUUUS .	. 0.0	T rac	'V FLOACE WE	. 4.6	,,,
		Rat	ed speed rpm	: 1345	5
			k travel mm	: 10.6	
CONTROL LEVER		+			
			ed speed rpm	: 1406	
		+ Tol	erance 1/min	: +- 4	t

rack travel mm	: 4.00
LOW IDLE	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.55 : + 0.35
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 470 : ← 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.65 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.95 : + 0.05
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	RACTERISTICS :
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 77.5 : + 1.5 : + 4.0 : 5.0 : 7.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 900 : 77.5 : + 1.5 : + 4.0 : 5.0 : 7.0

Tolerance cm3/1000 strokes : +- 5.0 Check tolerance cm3/1000s. : +- 8.0

LOW IDLE

350 Rated speed rpm : rack travel mm : 6.55 Tolerance mm : **←** 0.35 Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.0 .

End of test specification sheet

cm3/1000 strokes :

85.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 23.06.95 Edition : ISO 4113 Test oil Combination No. : 0 403 476 081 Injection pump Pump designation : PES6MW100/720RS1196 : -1 : 0 413 406 219 EP type number Governor Governer design. : RSV350...1050MW0A338 : 0 420 085 138 Governer no. Cust. part No. :

Customer-spec.	information
Customer	: LIEBHERR
Motor	: D 916 T
Power KW	: 180.0

TEST BENCH REQUIREMENTS Inlet line : 3.1

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm: 600

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.45
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: −300
Tolerance : + 0.50
Check

tolerance °NW : + 0.75

BASIC SETTING

Spreed

Rated speed rpm : 1050

Rack travel in mm : 13.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 151.0

Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.0

Tolerance cm3/1000 strokes : 3.5

	ı
Check tolerance cm3/1000s. : 6.0	control lever position degree : 104.0
Rated speed rpm : 350	tolerance degree : + 4.0
	RATED SPEED
Rack travel in mm : 9.80 Tolerance mm : + 0.20	rack travel mm : 12.25
Del. quantity cm3/1000 strokes : 73.0	+ Rated speed rpm : 1075 + Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : + 2.0	+
Check tolerance	+ Rated speed rpm : 1140
cm3/1000s. : +- 4.5 Spreed	† Tolerance 1/min : + 10
Tolerance cm3/1000 strokes : 3.5	rack travel mm : 1.00 Tolerance mm : + 0.70
Check tolerance	Rated speed rpm : 1250
cm3/1000s. : 5.0	+ rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1190
WITH GOVERNOR	Ŧ
	LOW IDLE
GUIDE SLEEVE POSITION	‡
Rated speed rpm : 800	control lever position degree : 76.0
	tolerance degree : + 4.0
Rack travel in mm: 0.65 Tolerance mm: + 0.35	Setting point w/out bumper spring
governor spring	Rated speed rpm : 350
pre-tension click setting x : 5.00	rack travel mm : 6.70
	+ Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 350 rack travel mm : 9.80
Rated speed rpm : 1050	+ rack travel mm : 9.80 + Tolerance mm : +- 0.20
Aneroid pressure hPa : 1300	Rated speed rpm : 100
Del. quantity cm3/1000 strokes : 151.0	+ CRT mm min. :> 19.00
Tolerance	+
cm3/1000 strokes : +- 1.0 Check tolerance	TORQUE CONTROL
cm3/1000s. : + 3.0 Spreed	+ Rated speed rpm : 1050
Tolerance cm3/1000 strokes : 3.5	rack travel mm : 13.25 Tolerance mm : + 0.05
Check tolerance	+
cm3/1000s. : 6.0	Rated speed rpm : 500 rack travel mm : 13.25
	Tolerance mm : + 0.10
CONTROL LEVER	Rated speed rpm : 800
	+ rack travel mm : 13.25 + Tolerance mm : + 0.10

Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: 14.75 : + 0.25	Check tolerance cm3/1000s. : +- 4.0 Aneroid pressure hPa : 600 Del. quantity cm3/1000 strokes : 113.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Pressure hPa rack travel mm Tolerance mm	: 13.25	BREAKAWAY
MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm	: - : 600 : + 0.05	Rack travel in mm: 12.25 Rated speed rpm: 1075 Tolerance 1/min: + 5
Rated speed rpm	: 600	STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm	: 500 : 1.05 : ← 0.10	Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity
Pressure hPa rack travel mm Tolerance mm	: 1.95 : + 0.10	- cm3/1000 strokes : 132.0 - Tolerance - cm3/1000 strokes : +- 5.0 - Check tolerance - cm3/1000S. : +- 8.0
FUEL DELIVERY CHA	RACIERISTICS	LOW IDLE
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1300 : 500	Rated speed rpm : 350 rack travel mm : 9.80 Tolerance mm : +- 0.20
cm3/1000 strokes Tolerance cm3/1000 strokes		+ Del. quantity + cm3/1000 strokes : 73.0 + Tolerance
Check tolerance cm3/1000s.	: +- 4.0	cm3/1000 strokes : + 2.0 Check tolerance
Spreed Tolerance cm3/1000 strokes	: 5.0	cm3/1000s. : + 4.5 Spreed Tolerance
Check tolerance cm3/1000s.	: 7.0	- cm3/1000 strokes : 3.5 - Check tolerance - cm3/1000s. : 5.0
Aneroid pressure hPa	: 1300	
Rated speed rpm Del. quantity cm3/1000 strokes		End of test specification sheet
Tolerance cm3/1000 strokes		‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.04.95 Test oil : 180 4113

Combination No. : 0 403 476 097

Injection pump

Pump designation : PES6MW100/720RS1131

: -1

EP type number : 0 413 406 165

Governor

Governer design. : RSV350...1300MW0A342

: -2

Governer no. : 0 420 085 157

Cust. part No. : 0200740002

Customer-spec. information Customer : MB-NFZ Motor : OM 366 LA Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05
Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 15.65 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 117.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed		+	
Tolerance cm3/1000 strokes	: 3.5	CONTROL LEVER	
Check tolerance		T control lever	
cm3/1000s.	: 6.0	position degree tolerance degree	
Rated speed rpm	: 350	RATED SPEED	
Rack travel in mm	1: 7.40	+	
Tolerance mm	: +- 0.40	+ rack travel mm	: 1.00
Del. quantity	44.0	† Tolerance mm	: ← 0.70
cm3/1000 strokes Tolerance	: 11.0	Rated speed rpm	: 1600
cm3/1000 strokes	: ÷- 2.0	rack travel mm	: 4.00
Check tolerance		Rated speed rpm	: 1475
cm3/1000s.	: +- 4.5	+	
Spreed		rack travel mm	: 14.60
Tolerance cm3/1000 strokes	: 3.5	+ Rated speed rpm + Tolerance 1/min	: 1345 : +- 5
Check tolerance	: 3.5	I roterance minin	. —
cm3/1000s.	: 5.5	ASSEMBLY GOVERNOR	SETTING
		Rated speed rpm	: 1340
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	rack travel mm	: 14.65
		+ Rated speed rpm	: 1436
		+ Tolerance 1/min	: +- 4
GUIDE SLEEVE POSI	TION	+ rack travel mm	: 4.00
00100 000010 7001	, 2019	+ Rated speed rpm	: 1341
Rated speed rpm	: 800	rack travel mm	: 14.65
Rack travel in mm	: 0.65	Rated speed rpm	: 1437
Tolerance mm	: +- 0.35	+ Tolerance 1/min	: +- 4
		+ rack travel mm	: 4.00
governor spring pre-tension		Rated speed rpm	: 1342
click setting x	: 4.00	+ rack travel mm	: 1342 : 14.65
otick setting x	. 4.00	+	
		+ Rated speed rpm	: 1438
FULL LOAD DELIVER	Y AT FULL LOAD STOP	+ Tolerance 1/min	: + 4
Rated speed rpm	: 1300	rack travel mm	: 4.00
Aneroid pressure	: 1300	T Rated speed rpm	: 1343
hPa	: 1000	+ rack travel mm	: 14.65
Del. quantity		+	
cm3/1000 strokes	: 117.0	+ Rated speed rpm	: 1439
Tolerance	4.0	+ Tolerance 1/min	: +- 4
cm3/1000 strokes Check tolerance	: ← 1.0	rack travel mm	: 4.00
cm3/1000s.	: +- 3.0	F Rated speed rpm	: 1344
Spreed	3.0	+ rack travel mm	: 14.65
Tolerance		+	
cm3/1000 strokes	: 3.5	+ Rated speed rpm	: 1440
Check tolerance		+ Tolerance 1/min	: + 4
cm3/1000s.	: 6.0	+ rack travel mm	: 4.00
		Rated speed rpm	: 1345
		rack travel mm	: 14.65

1441 Rated speed rpm Tolerance 1/min rack travel mm 4.00 LOW IDLE Setting point w/out bumper spring 350 Rated speed rpm rack travel mm 7.40 Testing: 2.00 rack travel mm Rated speed rpm 460 Tolerance 1/min 30 Rated speed rpm 100 CRT mm min. : > 19.00 TORQUE CONTROL 1300 Rated speed rom 15.65 rack travel mm Tolerance mm 0.05 600 Rated speed rpm rack travel mm 15.65 : +- 0.10 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 1000 Pressure hPa 15.65 rack travel mm Tolerance mm : + 0.10**MEASUREMENT** Pressure hPa Rated speed rpm 500 Tolerance mm : + 0.05 Rated speed rpm 500 Pressure hPa /6 % 500 3.70 rack travel mm

0.10

1.90

270

FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1000 hPa 600 Rated speed rpm Del. quantity cm3/1000 strokes 112.0 : Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes 5.0 Check tolerance 7.0 cm3/1000s. Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 32.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 3.0 : +-STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. 8.0 : +-LOW IDLE Rated speed rpm 350 7.40 rack travel mm Tolerance mm 0.40Del. quantity 11.0 cm3/1000 strokes : Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed

: +- 0.10

Tolerance mm

Tolerance mm

Pressure hPa

rack travel mm

Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : 3.5

5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.05.95 Test oil : ISO 4113

Combination No. : 0 403 476 105

Injection pump

Pump designation : PES6MW100/720RS1131 EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MW0A342

: -8

: 0 420 085 171 Governer no.

Cust. part No. : 0210746702

Customer-spec. information Customer : MB-NFZ Motor : OM 366 A Power KW : 114.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 : + 0.05Tolerance mm Check : + 0.10 tolerance mm

Rack travel in mm: 10.50 : + 1.50 Tolerance mm

Firing order : 1-5-3-6-2-: 4

: 0-60-120-180-240 Phasing

: -300 : + 0.50 Tolerance

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 10.95 : ← 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 84.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

: + 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	control lever
Check tolerance cm3/1000s. : 6.0	position degree : 104.0 tolerance degree : +- 4.0
Rated speed rpm : 350	RATED SPEED
	+ rack travel mm : 1.00
Rack travel in mm : 6.15 Tolerance mm : + 0.35 Del. quantity	Tolerance mm : +- 0.70 Rated speed rpm : 1450
cm3/1000 strokes : 11.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1320
cm3/1000 strokes : + 2.0 Check tolerance	rack travel mm : 9.90
cm3/1000s. : +- 4.5 Spreed Tolerance	Rated speed rpm : 1248 Tolerance 1/min : +- 8
cm3/1000 strokes : 3.5 Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : 5.5	Rated speed rpm : 1240 rack travel mm : 9.90
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1289
WITH GOVERNOR	+ Tolerance 1/min : + 4
	rack travel mm : 4.00
	Rated speed rpm : 1241
GUIDE SLEEVE POSITION	rack travel mm : 9.90
Rated speed rpm : 800	Rated speed rpm : 1290
Rack travel in mm : 0.65	+ Tolerance 1/min : + 4 + rack travel mm : 4.00
Tolerance mm : + 0.35	+
governor spring	Rated speed rpm : 1242 rack travel mm : 9.90
pre-tension	+ rack travet min . 7.70
click setting x : 5.75	Rated speed rpm : 1291
	+ Tolerance 1/min : + 4 + rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.00
	Rated speed rpm : 1243
Rated speed rpm : 1200	rack travel mm : 9.90
Aneroid pressure hPa : 750	Rated speed rpm : 1292
Del. quantity	+ Tolerance 1/min : + 4
cm3/1000 strokes : 84.0 Tolerance	rack travel mm : 4.00
cm3/1000 strokes : + 1.0	Rated speed rpm : 1244
Check tolerance cm3/1000s. : + 3.0	rack travel mm : 9.90
Spreed	Rated speed rpm : 1293
Tolerance	+ Tolerance 1/min : +- 4
cm3/1000 strokes : 3.5	rack travel mm : 4.00
Check tolerance cm3/1000S. : 6.0	Rated speed rpm : 1245
CIII . C.U	rack travel mm : 9.90
	+
	+ Rated speed rpm : 1294
CONTROL LEVER	+ Tolerance 1/min : +- 4

rack travel mm	: 4.00	rack travel mm : 1.15 Tolerance mm : + 0.10
LOW IDLE		- †
Setting point w/	out bumper spring	†
Rated speed rpm	: 350	+ FUEL DELIVERY CHARACTERISTICS
rack travel mm	: 6.15	Aneroid pressure
Testing:		+ hPa : 750 + Rated speed rpm : 600 + Del. quantity
rack travel mm		+ cm3/1000 strokes : 79.5
Rated speed rpm Tolerance 1/min		+ Tolerance + cm3/1000 strokes : +- 1.5
roterance initia	. + 40	Check tolerance
Rated speed rpm	: 100	+ cm3/1000s. : + 4.0
CDTi-	. > 40.00	+ Spreed
CRT mm min.	: > 19.00	+ Tolerance + cm3/1000 strokes : 5.0
		- Check tolerance
TORQUE CONTROL		cm3/1000s. : 7.0
Rated speed rpm	: 1200	Aneroid pressure
rack travel mm	: 10.95	+ hPa : -
Tolerance mm	: +- 0.05	+ Rated speed rpm : 500
Rated speed rpm	: 600	+ Del. quantity + cm3/1000 strokes : 46.0
ack travel mm		+ Tolerance
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : +- 1.0
Poted aroud num	. 1000	+ Check tolerance + cm3/1000s. : + 3.0
Rated speed rpm rack travel mm		T CM3/10005. : +- 3.0
olerance mm		
ANEROID/ALTITUDE		STARTING FUEL DELIVERY
COMPENSATOR TEST		+ Rated speed rpm : 100
		+ Rated speed rpm : 100 + Del. quantity
SETTING		+ cm3/1000 strokes : 88.0
)	. 500	Tolerance
lated speed rpm Pressure hPa	: 500 : 750	+ cm3/1000 strokes : +- 5.0 + Check tolerance
rack travel mm	: 11.75	+ cm3/1000s. : + 8.0
olerance mm	: ← 0.10	<u>†</u>
IEASUREMENT		<u> </u>
Pressure hPa	: -	LOW IDLE
Rated speed rpm	: 500	†
olerance mm	: +- 0.05	+ Rated speed rpm : 350 + rack travel mm : 6.15
lated speed rpm	: 500	+ rack travel mm : 6.15 + Tolerance mm : + 0.35 + Del. quantity
ressure hPa	: 400	+ cm3/1000 strokes : 11.0
ack travel mm	: 1.75	+ Tolerance
olerance mm	: ← 0.10	cm3/1000 strokes : + 2.0 Check tolerance
Pressure hPa	: 300	+ cm3/1000s. : + 4.5
		•

Spreed
Tolerance
cm3/1000 strokes :
Check tolerance
cm3/1000s. : 3.5

5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.07.95 Test oil : ISO 4113

Combination No. : 0 403 476 136

Injection pump

Pump designation : PES6MW100/320RS1237

EP type number : 0 413 406 233

Governor

Governer design. : RSV300...1100MW1A353

Governer no. : 0 420 085 223

Cust. part No.

Customer-spec. information

Customer : VME
Motor : TD61GD
Power KW : 92.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 630 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 9.90 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 106.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

-	
I	cm3/1000s. : 6.0
	Check tolerance
+ Tolerance mm : + 0.10	cm3/1000 strokes : 3.5
rack travel mm : 10.20	Tolerance
Rated speed rpm : 660	Spreed
1.000 mm	cm3/1000s. : +- 3.0
Tolerance mm : + 0.10	Check tolerance
rack travel mm : 11.30	cm3/1000 strokes : +- 1.0
Rated speed rpm : 500	cm3/1000 strokes : 106.0 Tolerance
Tolerance mm : + 0.05	Del. quantity
rack travel mm : 9.90	hPa : -
Rated speed rpm : 1100	Aneroid pressure
+	Rated speed rpm : 1100
TORQUE CONTROL	ARE FAUR AFFERENT MI TAFF FOUR OTOL
İ	FULL LOAD DELIVERY AT FULL LOAD STOP
+ CRT mm min. : > 19.00	_
+	click setting x : 4.00
Rated speed rpm : 100	governor spring pre-tension
Tolerance mm : + 0.10	dovernor spring
rack travel mm : 6.50	Tolerance mm : + 0.35
Rated speed rpm : 315	Rack travel in mm: 0.65
T resemp.	Rated speed rpm : 800
† Testing:	Rated speed rpm : 800
tolerance degree : + 4.0	GUIDE SLEEVE POSITION
position degree : 82.0	
t control lever	
+	WITH GOVERNOR
LOW IDLE	(B) SETTING OF INJECTION PUMP
<u> </u>	
10000	cm3/1000s. : 5.5
Tolerance mm : + 0.70 Rated speed rpm : 1250	cm3/1000 strokes : 3.5 Check tolerance
rack travel mm : 1.00	Tolerance 7.5
+	Spreed
+ Tolerance 1/min : + 15	cm3/1000s. : +- 4.5
rack travel mm : 4.00 Rated speed rpm : 1180	cm3/1000 strokes : +- 2.0 Check tolerance
†	Tolerance 2.4
Tolerance 1/min : + 5	cm3/1000 strokes : 6.0
+ Rated speed rpm : 1140	Del. quantity
rack travel mm : 8.90	Tolerance mm : + 0.20
RATED SPEED	Rack travel in mm: 6.50
+	Rated speed rpm : 315
tolerance degree : + 4.0	· 0.0
t control loven	Check tolorope
cantrol lever position degree : 114.0 tolerance degree : + 4.0	Check tolerance cm3/1000s. : 6.0

Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 107.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance 7.0 cm3/1000s. **BREAKAWAY** Rack travel in mm: 8.90 Rated speed rpm Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.00 1.00 Tolerance mm Del. quantity 90.0 cm3/1000 strokes : Tolerance 7.0 cm3/1000 strokes Check tolerance cm3/1000s. : + 10.0LOW IDLE Rated speed rpm 315 rack travel mm 6.50 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 6.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance

4.5

3.5

5.5

End of test specification sheet

cm3/1000s.

cm3/1000 strokes : Check tolerance cm3/1000s. :

Spreed Tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.04.95 Test oil : ISO 4113

Combination No. : 0 403 476 138

Injection pump

Pump designation : PES6MW100/720RS1130

: -3

EP type number : 0 413 406 235

Governor

Governer design. : RSV350...1300MW0A318

Governer no. : 0 420 085 052

Cust. part No. : 0250748802

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1280

Rack travel in mm : 10.10 Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes : 77.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

 $\frac{13}{1000}$: + 3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s. : 6.0

Rated speed rpm : 350

Rack travel in mm : 6.00

Tolerance mm : \leftarrow 0.20

Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 5.5 (B) SETTING OF INJECTION PUMP	rack travel mm : 4.00 Rated speed rpm : 1380 Tolerance 1/min : + 15 rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1500 LOW IDLE
WITH GOVERNOR	control lever position degree : 78.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Testing:
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	Rated speed rpm : 350 rack travel mm : 6.00 Tolerance mm : + 0.10
governor spring pre-tension click setting x : 6.25	rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : + 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100 CRT mm min. :> 19.00
Rated speed rpm : 1280 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0	TORQUE CONTROL Rated speed rpm : 1280 rack travel mm : 10.10 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 10.50 Tolerance mm : + 0.10 Rated speed rpm : 825 rack travel mm : 10.25 Tolerance mm : + 0.10
control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 9.10 Rated speed rpm : 1325 Tolerance 1/min : + 5	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 74.0 Tolerance cm3/1000 strokes : + 1.5

Check tolerance cm3/1000s. 4.0 Spreed Tolerance 5.0 cm3/1000 strokes : Check tolerance cm3/1000s. 7.0 BREAKAWAY Rack travel in mm : 9.10 Rated speed rpm : Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. 8.0 LOW IDLE Rated speed rpm 350 rack travel mm 6.00 : +- 0.20 Tolerance mm Del. quantity 11.0 cm3/1000 strokes : Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s.Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance cm3/1000s. 5.5 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.05.95 Test oil : 180 4113

Combination No. : 0 403 476 141

Injection pump

Pump designation : PES6MW100/720RS1144

EP type number : 0 413 406 138

Governor

Governer design. : RSV350...1300MW0A364

6overner no. : 0 420 085 247

Cust. part No. : 0260742002

Customer—spec. information Customer : MB—NFZ Motor : CM 366 LA Power KW : 127.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.65
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 85.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	T
Check tolerance cm3/1000S. : 6.0	control lever position degree : 113.0
Rated speed rpm : 350	tolerance degree : +- 4.0
	RATED SPEED
Rack travel in mm: 8.40	†
Tolerance mm : + 0.35	+ rack travel mm : 1.00 + Tolerance mm : +- 0.70
Del. quantity cm3/1000 strokes : 11.0	+ Tolerance mm : +- 0.70 + Rated speed rpm : 1550
Tolerance	T Naced Speed I pill . 1990
cm3/1000 strokes : + 2.0	rack travel mm : 4.00
Check tolerance	+ Rated speed rpm : 1445
cm3/1000s. : +- 4.5	10 (0
Spreed Tolerance	+ rack travel mm : 10.60 + Rated speed rpm : 1343
cm3/1000 strokes : 3.5	Tolerance 1/min : +- 8
Check tolerance	+
cm3/1000s. : 5.5	ASSEMBLY GOVERNOR SETTING
	Rated speed rpm : 1340
(B) SETTING OF INJECTION PUMP	+ rack travel mm : 10.60
WITH GOVERNOR	Pated aread arm a 1/01
	+ Rated speed rpm : 1401 + Tolerance 1/min : + 4
	+ rack travel mm : 4.00
GUIDE SLEEVE POSITION	+
n i l nin	+ Rated speed rpm : 1341
Rated speed rpm : 800	rack travel mm : 10.60
Rack travel in mm : 0.65	Rated speed rpm : 1402
Tolerance mm : + 0.35	+ Tolerance 1/min : + 4
	+ rack travel mm : 4.00
governor spring pre-tension	Rated speed rpm : 1342
click setting x : 4.20	+ rack travel mm : 10.60
	+
	+ Rated speed rpm : 1403
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : + 4 rack travel mm : 4.00
Rated speed rpm : 1300	T rack travet mm : 4.00
Aneroid pressure	Rated speed rpm : 1343
hPa : -	+ rack travel mm : 10.60
Del. quantity	1/0/
cm3/1000 strokes : 85.0 Tolerance	Rated speed rpm : 1404 Tolerance 1/min : + 4
cm3/1000 strokes : + 1.0	rack travel mm : 4.00
Check tolerance	+
cm3/1000s. : $+3.0$	+ Rated speed rpm : 1344
Spreed	+ rack travel mm : 10.60
Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 1405
Check tolerance	+ Tolerance 1/min : + 4
cm3/1000s. : 6.0	rack travel mm : 4.00
	†
	Rated speed rpm : 1345 rack travel mm : 10.60
CONTROL LEVER	Track travet min : 10.00
TOTAL CONTENT	Rated speed rpm : 1406
	+ Tolerance 1/min : + 4

LOW IDLE	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 8.40 : +- 0.35
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 470 : + 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.65 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.95 : + 0.10
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	RACTERISTICS :
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 78.0 : 78.0 : + 1.5 : + 4.0 : 5.0 : 7.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 78.0 : 78.0 : + 1.5 : + 4.0 : 5.0 : 7.0

Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0

350 Rated speed rpm : rack travel mm : 8.40 : + 0.35 Tolerance mm Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

End of test specification sheet

cm3/1000 strokes : 85.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 21.06.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 476 142

Injection pump

Pump designation : PES6MW100/720RS1239

EP type number : 0 413 406 238

Governor

Governer design. : RSV350...1200MW0A372

Governer no. : 0 420 085 255

Cust. part No. : 0250748902

Customer-spec. information Customer : MB-NFZ : CM366LA Motor Power KW : 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 Tolerance bar : \leftarrow 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 3.65 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance mm : + 1.00

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 12.30

: + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 67.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: + 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

		+		
Check tolerance		- 1	control lever	
cm3/1000s.	: 6.0	+	position degree	: 119.0
		+	tolerance degree	: +- 4.0
Rated speed rpm	: 350	+	-	
		+	RATED SPEED	
Rack travel in mm		+		
Tolerance mm	: ← 0.25	+	rack travel mm	: 1.00
Del. quantity		+	Tolerance mm	: +- 0.70
cm3/1000 strokes	: 12.0	+	Rated speed rpm	: 1450
Tolerance		+	•	
cm3/1000 strokes	: +- 2.0	+	rack travel mm	: 4.00
Check tolerance		+	Rated speed rpm	: 1400
cm3/1000S.	: ← 4.5	+	•	
Spreed		+	rack travel mm	: 11.30
Tolerance		+	Rated speed rpm	: 1250
cm3/1000 strokes	: 3.5	+	Tolerance 1/min	
Check tolerance		+		
cm3/1000s.	: 5.5	+	ASSEMBLY GOVERNOR	SETTING
		+		
		+	Rated speed rpm	: 1240
(B) SETTING OF INJ	ECTION PUMP	+	rack travel mm	: 11.30
WITH GOVERNOR		+		
		+	Rated speed rpm	
		+	Tolerance 1/min	
		+	rack travel mm	: 4.00
GUIDE SLEEVE POSIT	ION	+		
		+	Rated speed rpm	
Rated speed rpm	: 800	+	rack travel mm	: 11.30
		+		
Rack travel in mm		+	Rated speed rpm	: 1371
Tolerance mm	: +- 0.35	+	Tolerance 1/min	: +- 4
_		+	rack travel mm	: 4.00
governor spring		+		
pre-tension		+	Rated speed rpm	
click setting x	: 4.00	†	rack travel mm	: 11.30
		†		4
		+	Rated speed rpm	: 1372
FULL LOAD DELIVERY	AT FULL LOAD STOP	+	Tolerance 1/min	: +- 4
~	4200	†	rack travel mm	: 4.00
Rated speed rpm	: 1200	†	Data dan and anno	42/7
Aneroid pressure		†	Rated speed rpm	
hPa	-	Ť	rack travel mm	: 11.30
Del. quantity	. 47.0	Ť	Dated amond www	. 4777
cm3/1000 strokes	: 07.0	T	Rated speed rpm	: 1373
Tolerance cm3/1000 strokes	10	T	Tolerance 1/min rack travel mm	: +- 4
	: 1.0	T	rack travet mm	: 4.00
Check tolerance cm3/1000s.	: + 3.0	T	Pated speed spm	: 1248
	. — 3.0	T	Rated speed rpm rack travel mm	: 11.30
Spreed		T	rack travet um	. 11.50
Tolerance cm3/1000 strokes	: 3.5	I	Rated speed rpm	: 1378
Check tolerance	• 5.7	I	Tolerance 1/min	: + 4
cm3/1000s.	: 6.0	I	rack travel mm	4.00
511D/ 10003 ·	. 0.0	I	THE CLUYCL HAII	. 4.00
		\perp	Rated speed rpm	: 1249
		1	rack travel mm	: 11.30
CONTROL LEVER		1	. GOIL STUYOU HER	
TOTAL MERELL		1	Rated speed rpm	: 1379
		1	Tolerance 1/min	: +- 4
		ı		-

rack travel mm : 4.00 LOW IDLE

Testing:

Rated speed rpm 350 rack travel mm 7.50 : +- 0.25 Tolerance mm

Rated speed rpm 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm 1200 rack travel mm 12,30 Tolerance mm : +- 0.05

Rated speed rpm 600 rack travel mm 12.30 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm 600

Del. quantity

cm3/1000 strokes : 45.0

Tolerance

cm3/1000 strokes : +-1.5

Check tolerance

cm3/1000s. 4.0 Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000S. 7.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : +-5.0

Check tolerance

cm3/1000s. 8.0 LOW IDLE

Rated speed rpm 350 7.50 rack travel mm 0.25 Tolerance mm Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance 4.5 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 21.06.95 Test oil : ISO 4113

Combination No. : 0 403 476 143

Injection pump

Pump designation : PES6MW100/720RS1239

EP type number : 0 413 406 238

Governor

Governer design. : RSV350...1200MW0A373

Governer no. : 0 420 085 256

Cust. part No. : 0260746002

Customer—spec. information Customer : M8-NFZ Motor : OM366LA

Power KW : 62.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 10.30 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 47.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

		4			
Check tolerance		İ con	trol lever		
cm3/1000s.	: 6.0		sition degree	:	119.0
Datad amand aus	. 750	+ 247			
Rated speed rpm	: 350	T RAI	ED SPEED		
Rack travel in mm	: 7.50	+ rac	k travel mm	:	1.00
Tolerance mm	: +- 0.25	+ Tol	erance mm	: +-	0.70
Del. quantity		+ Rat	ed speed rpm	:	1450
cm3/1000 strokes	: 12.0	+			
Tolerance			k travel mm	:	4.00
cm3/1000 strokes	: +- 2.0	+ Rate	ed speed rpm	:	1370
Check tolerance		+			
cm3/1000s.	: ← 4.5		k travel mm	:	
Spreed			ed speed rpm		1250
Tolerance	7.5	+ 100	erance 1/min	: +-	8
cm3/1000 strokes	: 3.5	1 400	THE V COVERNOR		710
Check tolerance	: 5.5	† ASS	EMBLY GOVERNOR	SELL	TMG
cm3/1000s.	: 5.5	T 2-1		_	42/0
			ed speed rpm k travel mm	•	1240 9.30
(B) SETTING OF IN.	IECTION DIME	raci	K travet mm	÷	9.50
WITH GOVERNOR	JECTION FUNP	T Pat	ed speed rpm		1340
WITH GOVERNOR			erance 1/min		
			k travel mm	•	4.00
		I	K CIGACC WIN	•	4.00
GUIDE SLEEVE POSIT	FTON	Rate	ed speed rpm	:	1241
4010E 0EEE1E 7 001.	. 40.0		k travel mm	•	9.30
Rated speed rpm	: 800	1		•	,,,,
via con openio i più		Rate	ed speed rpm	:	1341
Rack travel in mm	: 0.65		erance 1/min		
Tolerance mm	: +- 0.35	raci	k travel mm	:	4.00
		+			
governor spring		+ Rate	ed speed rpm	:	1242
pre-tension		+ rack	k travel mm	:	9.30
click setting x	: 4.00	+			
			ed speed rpm	:	1342
			erance 1/min	: +-	. 4
FULL LOAD DELIVERY	AT FULL LOAD STOP	+ rack	k travel mm	:	4.00
6 1 1	4260	†			42/7
Rated speed rpm	: 1200		ed speed rpm	:	1243
Aneroid pressure hPa	_	† rack	k travel mm	:	9.30
nra Del. quantity	•	T Pate	ed speed rpm		1343
cm3/1000 strokes	: 47.0		erance 1/min	• +-	4
Tolerance	. 47.0		k travel mm	• '	4.00
cm3/1000 strokes	: + 1.0	1	CI GACE UND	•	4.00
Check tolerance		Rate	ed speed rpm	•	1248
cm3/1000s.	: +- 3.0		k travel mm	:	9.30
Spreed		1		·	
Tolerance		∔ Rate	ed speed rpm	:	1348
cm3/1000 strokes	: 3.5		erance 1/min	: +-	4
Check tolerance		+ rack	k travel mm	:	4.00
cm3/1000s.	: 6.0	+			
			ed speed rpm	:	1249
		† rack	k travel mm	:	9.30
		†			47/0
CONTROL LEVER			ed speed rpm	:	1349
			erance 1/min	: +-	4 4 00
		+ rack	k travel mm	:	4.00

LOW IDLE

Testing:

Rated speed rpm : 350 rack travel mm : 7.50 Tolerance mm : + 0.25

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1200 rack travel mm : 10.30 Tolerance mm : + 0.05

Rated speed rpm : 600 rack travel mm : 10.30 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 28.0

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance

cm3/1000s. : + 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 7.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : + 8.0

LOW IDLE

Rated speed rpm	: 3	350
rack travel mm	:	7.50
Tolerance mm	: +-	0.25
Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.04.95 Test oil : ISO 4113

Combination No. : 0 402 734 801

Injection pump

Pump designation : PES4P12OA12ORS7313 EP type number : 0 412 724 801

Governor

Governer design. : RQV400...1250PA1113K

Governer no. : 0 421 815 376

Cust. part No. : 3926603

Customer—spec. information Customer : CDC Motor : 4BTA-A Power KW : 97.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

inside diameter : 3.0
 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Tolerance bar : +- 0.10

Prestroke mm : + 0.23

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.01.95 Edition Test oil : ISO 4113

Combination No. : 0 401 840 776

Injection pump

Pump designation: PE12P12OA52O/4LS3854

: -1

: 0 411 820 730 EP type number

Governor

Governer design. : RQ900PA1196 : 0 421 801 753 Governer no.

Cust. part No.

Customer-spec. information Customer : DAEWOO : D2842LE Motor

Power KW : 260.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 2.0 Tolerance °C

: 1 417 413 025 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

208.5 Tolerance bar 1.5

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm 600 :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm 4.25 : + 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm : 10.50 Tolerance mm : **←** 1.50

: 12-1-5-9-8 Firing order

: - 3- 4- 11- 10 : - 2- 6- 7

: 0-45-60-105-120 Phasing

: -165-180-225-240 : -285-300-345

Tolerance : +- 0.30

Check

tolerance "NW : + 0.50

Start of delivery mark

Barrel no. 12

BASIC SETTING

Rated speed rpm 850

12.50 Rack travel in mm : Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 230.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0	+ Rated speed rpm : 900 + rack travel mm : 11.50
Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 932 Tolerance 1/min : + 4 rack travel mm : 4.00
Check tolerance cm3/1000s. 9.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1050
Rated speed rpm : 300	Rated speed rpm : 901
Rack travel in mm : 4.20 Tolerance mm : +- 0.20	rack travel mm : 11.50
Del. quantity cm3/1000 strokes : 20.0 Tolerance	+ Rated speed rpm : 933 + Tolerance 1/min : + 4 + rack travel mm : 4.00
cm3/1000 strokes : +- 3.0 Check tolerance	rack travel mm : 0.50
cm3/1000S. : +- 6.0 Spreed Tolerance	+ Tolerance mm : + 0.50 + Rated speed rpm : 1050
cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 902 rack travel mm : 11.50
cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 934 + Tolerance 1/min : + 4 + rack travel mm : 4.00
WITH GOVERNOR	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1050
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 903
Rated speed rpm : 850 Aneroid pressure	rack travel mm : 11.50
hPa : - Del. quantity cm3/1000 strokes : 230.0	Rated speed rpm : 935 Tolerance 1/min : + 4 rack travel mm : 4.00
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1050
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 904 rack travel mm : 11.50
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 936 Tolerance 1/min : + 4 rack travel mm : 4.00
CONTROL LEVER control lever	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1050
position degree : 90.0 tolerance degree : + 4.0	Rated speed rpm : 905 rack travel mm : 11.50
ASSEMBLY GOVERNOR SETTING	Rated speed rpm : 937 Tolerance 1/min : + 4

rack travel mm : 4.00

 $\begin{array}{lll} \text{rack travel mm} & : & 0.50 \\ \text{Tolerance mm} & : & + & 0.50 \\ \end{array}$

Rated speed rpm : 1050

TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 12.50 Tolerance mm : + 0.05

LOW IDLE

Rated speed rpm : 300
rack travel mm : 4.20
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 20.0
Tolerance

cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. : + 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.09.95 Test oil : ISO 4113

Combination No. : 0 401 846 882

Injection pump

Pump designation : PE6P12OA32ORS32O6-1 EP type number : O 411 826 775

Governor

Governer design. : RQ750PA783-1 Governer no. : 0 421 801 432

Cust. part No. : 863232 PO4 V. 02/95

Customer-spec. information

Customer : VOLVO-PENTA Motor : TAMD 122 A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.80
Tolerance mm : + 0.05

TO CET GITCE TIRTI

Del. quantity cm3/1000 strokes : 345.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

	+ Check tolerance
Rated speed rpm : 300	+ cm3/1000s. : +- 4.0
	+ Spreed
Rack travel in mm: 5.00	+ Tolerance
Tolerance mm : +- 0.30	+ cm3/1000 strokes : 5.0
Del. quantity	+ Check tolerance
cm3/1000 strokes : 20.0	+ cm3/1000s. : 9.0
Tolerance	+
cm3/1000 strokes : + 3.0	+
Check tolerance	+
$cm3/1000s.$: \leftarrow 6.0	+ CONTROL LEVER
Spreed	+
Tolerance	+ control lever
cm3/1000 strokes : 5.0	+ position degree : 88.0
Check tolerance	+ tolerance degree : + 4.0
cm3/1000s. : 8.0	+
	+ RATED SPEED
	+
(B) SETTING OF INJECTION PUMP	+ rack travel mm : 12.80
WITH GOVERNOR	+ Rated speed rpm : 751
	+ Tolerance 1/min : + 3
	+
GUIDE SLEEVE TRAVEL	+ rack travel mm : 4.00
	+ Rated speed rpm : 791
Rated speed rpm : 757	+ Tolerance 1/min : +- 8
guide sleeve	+
travel mm : 4.06	† rack travel mm : 0.50
Tolerance mm : + 0.25	† Tolerance mm : +- 0.50
	Rated speed rpm : 850
Rated speed rpm : 510	}
guide sleeve	ASSEMBLY GOVERNOR SETTING
travel mm : -8.33	+
Tolerance mm : + 0.25	Rated speed rpm : 748
	rack travel mm : 12.80
Rated speed rpm : 860	}
guide sleeve	Rated speed rpm : 789
travel m : 16.96	Tolerance 1/min : + 5
Tolerance mm : + 0.25	rack travel mm : 4.00
•	1
Rated speed rpm : 814	rack travel mm : 0.50
guide sleeve	Tolerance mm : + 0.50
travel mm : 10.00	Rated speed rpm : 850
Tolerance mm : + 0.25	<u> </u>
	Rated speed rpm : 749
Rated speed rpm : 870	rack travel mm : 12.80
guide sleeve	1
travel mm : 11.50	Rated speed rpm : 790
Tolerance mm : + 0.50	Tolerance 1/min : + 5
	rack travel mm : 4.00
	-
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.50
•	Tolerance mm : +- 0.50
Rated speed rpm : 700	Rated speed rpm : 850
Aneroid pressure	+
hPa : -	Rated speed rpm : 750
Del. quantity	rack travel mm : 12.80
cm3/1000 strokes : 345.0	+
Tolerance -	Rated speed rpm : 791
cm3/1000 strokes : +- 1.0	Tolerance 1/min : + 5
	rack travel mm : 4.00
	I many an united a name

rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 850
Rated speed rpm	: 751
rack travel mm	: 12.80
Rated speed rpm	: 792
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 850
Rated speed rpm	: 752
rack travel mm	: 12.80
Rated speed rpm	: 793
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 12.80
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.50
Tolerance mm	: +- 0.50
Rated speed rpm	: 850
TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 13.80
Tolerance mm	: + 0.05

FOM IDE

Rated speed rpm	: 300
rack travel mm	: 5.00
Tolerance mm	: +- 0.30
Del. quantity	
cm3/1000 strokes	: 20.0
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Spreed	
Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance	
cm3/1000s.	: 8.0

End of test specification sheet

BREAKAWAY

Rack travel in mm : 12.80
Rated speed rpm : 751
Tolerance 1/min : +- 3

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 646 621

Injection pump

Pump designation : PE6P12OA72ORS7264 EP type number : 0 412 626 874

Governor

Governer design. : RQ900PA758-16 Governer no. : 0 421 801 685

Cust. part No. : 1337553

Customer—spec. information Customer : SCANIA Motor : D 11_

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Tolerance l/h: + 10.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05
Check

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

BASIC SETTING

Rack travel in mm : 5.10 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : + 6.0

Company	+	tolerance degree	: +- 4.0
Spreed Tolerance	‡	control lever	. 97.0
cm3/1000 strokes	: 5.0	position degree tolerance degree	: + 87.0 : + 4.0
Check tolerance cm3/1000s.	: 9.0	ASSEMBLY GOVERNOR	R SETTING
	+		
Rated speed rpm	: 850	Rated speed rpm rack travel mm	: 900 : 13.10
Rack travel in mo	ı: 14.15 I	Rated speed rpm	: 954
Tolerance mm	: ← 0.05 +	Tolerance 1/min	: + 4
	+	rack travel mm	: 4.00
Del. quantity cm3/1000 strokes	: 264.0	rack travel mm Tolerance mm	: 0.50 : + 0.50
Tolerance	I	Rated speed rpm	1000
cm3/1000 strokes	: + 1.0 ‡		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		Rated speed rpm	: 901
Check tolerance	+	rack travel mm	: 13.10
cm3/1000s.	: + 4.0	Rated speed rpm	: 955
Spreed		Tolerance 1/min	: +- 4
Tolerance	1	rack travel mm	: 4.00
cm3/1000 strokes	: 8.0		
	+	rack travel mm	: 0.50
Check tolerance	: 12.0	Tolerance min	: + 0.50 : 1000
cm3/1000s.	: 12.0 I	Rated speed rpm	: 1000
	1	Rated speed rpm	: 902
(B) SETTING OF IN	JECTION PUMP +	rack travel mm	: 13.10
WITH GOVERNOR	+	5 4 1 . 4	054
	†	Rated speed rpm Tolerance 1/min	: 956 : +- 4
	I	rack travel mm	4.00
FULL LOAD DELIVER	Y AT FULL LOAD STOP	TOOK STOVE MAIN	
	+	rack travel mm	: 0.50
Rated speed rpm	: 850	Tolerance mm	: + 0.50
Aneroid pressure	: 1500	Rated speed rpm	: 1000
hPa Del. quantity	: 1500	Rated speed rpm	: 903
cm3/1000 strokes	: 264.0	rack travel mm	: 13.10
Tolerance	+		
cm3/1000 strokes	: + 1.0 +	Rated speed rpm	: 957
Check tolerance	†	Tolerance 1/min	: + 4
cm3/1000s. Spreed	: ← 4.0 ±	rack travel mm	: 4.00
Tolerance	1	rack travel mm	: 0.50
cm3/1000 strokes	: 8.0	Tolerance mm	: ← 0.50
Check tolerance	+	Rated speed rpm	: 1000
cm3/1000s.	: 12.0	District around num	. 00/
	1	Rated speed rpm rack travel mm	: 904 : 13.10
		I GOT CI GYCL IMI	. 15.10
CONTROL LEVER	+	Rated speed rpm	: 958
	+	Tolerance 1/min	: +- 4
control lever	. 24.0	rack travel mm	: 4.00
position degree	: 26.0		

rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 1000
Rated speed rpm	: 905
rack travel mm	: 13.10
Rated speed rpm	: 959
Tolerance 1/min	: ← 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: +- 0.50
Rated speed rpm	: 1000

TORQUE CONTROL

850 Rated speed rpm : 14.15 rack travel mm : : + 0.05Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 1500 rack travel mm : 14.15 Tolerance mm : **←** 0.05

MEASUREMENT

Pressure hPa 500 Rated speed rpm rack travel mm 11.00 Tolerance mm : +- 0.20

Rated speed rpm : 500

210 Pressure hPa 11.90 rack travel mm Tolerance mm : **←** 0.20

440 Pressure hPa rack travel mm 13.45 : : +- 0.05 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 177.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

: +- 4.0 cm3/1000s.

STARTING FUEL DELIVERY

100 Rated speed rpm rack travel mm 10.40 Tolerance mm : + 0.20 Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.05.95 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 622

Injection pump

Pump designation: PE6P120A720RS7264 EP type number : 0 412 626 874

Governor

Governer design. : RQ1050PA758-17 : 0 421 801 686 Governer no.

Cust. part No. : 1337554

Customer-spec. information : SCANIA Customer Motor : D 11

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

2.5 Inlet press. bar : : +- 0.1 Tolerance bar

Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 : +- 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.05 : + 0.05Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.50

BASIC SETTING

5.10 Rack travel in mm: Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +-4.0

Check tolerance

cm3/1000s. : +-6.0

Spreed	+ guide sleeve + travel mm : 11.50 + Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 5.0	
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 9.0	+ Rated speed rpm : 850 + Aneroid pressure
Rated speed rpm : 850	+ hPa : 1500 + Del. quantity
Rack travel in mm : 14.15 Tolerance mm : + 0.05	- cm3/1000 strokes : 264.0 - Tolerance - cm3/1000 strokes : + 1.0
Del. quantity	
cm3/1000 strokes : 264.0	Spreed Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 4.0	
Spreed Tolerance	CONTROL LEVER
cm3/1000 strokes : 8.0	control lever position degree : 29.0
Check tolerance cm3/1000s. : 12.0	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 90.0 tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL	ASSEMBLY GOVERNOR SETTING
Rated speed rpm : 1056	Rated speed rpm : 1050 rack travel mm : 13.10
guide sleeve travel mm : 5.06 Tolerance mm : + 0.25	Rated speed rpm : 1103 Tolerance 1/min : +- 4
Rated speed rpm : 720	rack travel mm : 4.00
guide sleeve travel mm : -7.04	rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1150
Rated speed rpm : 1200 guide sleeve	Rated speed rpm : 1051 rack travel mm : 13.10
travel mm : 17.59 Tolerance mm : + 0.25	Rated speed rpm : 1104
Rated speed rpm : 1125 guide sleeve	Tolerance 1/min : +- 4 rack travel mm : 4.00
travel mm : 10.00 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50
	Rated speed rpm : 1150
Rated speed rpm : 1190	Rated speed rpm : 1052

rack travel mm	: 13.10	
Rated speed rpm	: 1105	•
Tolerance 1/min	: + 4	•
rack travel mm	: 4.00	
rack travel mm	: 0.50	•
Tolerance mm	: 0.50 : +- 0.50	
Rated speed rpm	: 1150	
nated speed i pill	. 7150	
Rated speed rpm	: 1053	
rack travel mm	: 13.10	•
Date I amazal	4407	•
Rated speed rpm	: 1106	•
Tolerance 1/min	: +- 4	-
rack travel mm	: 4.00	•
rack travel mm	: 0.50	
Tolerance mm	: +- 0.50	
Rated speed rpm	: 1150	
•		
Rated speed rpm	: 1054	
rack travel mm	: 13.10	•
Rated speed rpm	: 1107	
Tolerance 1/min	: + 4	
rack travel mm	4.00	•
		-
rack travel mm	: 0.50	•
Tolerance mm	: +- 0.50	-
Rated speed rpm	: 1150	
Rated speed rpm	: 1055	_
rack travel mm	: 13.10	_
TOOK CIGICE IM	. ,3.,6	-
Rated speed rpm	: 1108	-
Tolerance 1/min	: +- 4	-
rack travel mm	: 4.00	-
rack travel mm	: 0.50	7
rack travel mm Tolerance mm	: + 0.50	7
Rated speed rpm	: 1150]
nateu specu i pili	. 1150	1
		-
TORQUE CONTROL		
TOURDE CONTROL		7
Rated speed rpm	: 850	-
rack travel mm	: 14.15	+
Tolerance mm	: + 0.05	1
		1
ANEROID/ALTITUDE		4
COMPENSATOR TEST		4
		4
OFFITALIC .		1
SETTING		- 1

500

1500

rack travel mm	: 14.15
Tolerance mm	: + 0.05
MEASUREMENT	
Pressure hPa	: -
Rated speed rpm	: 500
rack travel mm	: 11.00
Tolerance mm	: + 0.20
Rated speed rpm	: 500
Pressure hPa	: 210
rack travel mm	: 11.90
Tolerance mm	: + 0.20
Pressure hPa	: 440
rack travel mm	: 13.45
Tolerance mm	: ← 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 177.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

Rated speed rpm :

Pressure hPa

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 10.07.95 Edition Test oil : ISO 4113

Combination No. : 0 402 648 600

Injection pump

Pump designation : PE8P12OA92O/4LS7266

: -2

: 0 412 628 901 EP type number

Governor

Governer design. : RQ900PA758-20 : 0 421 801 689 Governer no.

Cust. part No. : 1371442

Customer-spec. information : SCANIA Customer : DSC1457A Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 025

2.5 Inlet press. bar : : +- 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 4.45 : + 0.05Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4 : - 5- 6- 8

Phasing : 0-45-90-135-180 : -225-270-315

: +- 0.30 Tolerance

Check

: + 0.50 tolerance "NW

Start of delivery mark

1 Barrel no.

BASIC SETTING

700 Rated speed rpm

Rack travel in mm: 16.15 : + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 315.0

Tolerance	+			
	.0	FULL LOAD DELIVER	Y AT F	ULL LOAD STOP
Check tolerance cm3/1000s. : + 4.	.0	Rated speed rpm		700
	+	Aneroid pressure		500
Spreed Tolerance	†_	hPa Del. quantity	: 1	500
	.0	cm3/1000 strokes Tolerance	:	315.0
Check tolerance		cm3/1000 strokes	: +-	1.0
cm3/1000s. : 12.	."	Check tolerance cm3/1000s. Spreed	: +-	4.0
Rack travel in mm : 5.6	so I	Tolerance		
Tolerance mm : + 0.1		cm3/1000 strokes	:	8.0
Del. quantity	+	Check tolerance		
cm3/1000 strokes : 19. Tolerance	.0	cm3/1000s.	•	12.0
cm3/1000 strokes : +- 4. Check tolerance	.0	·		
cm3/1000s. : +- 6.	.0	CONTROL LEVER		
Spreed	+			
Tolerance	+	control lever		
cm3/1000 strokes : 5.	.0 +	position degree		28.0
Check tolerance cm3/1000s. : 9.	1	tolerance degree	: +-	4.0
cm3/1000s. : 9.	I	control lever		
	1	position degree	:	89.0
(B) SETTING OF INJECTION PL	JMP +	tolerance degree		4.0
WITH GOVERNOR	+	_		
	†	ACCOMPLY COURDNOD	00000	10
GUIDE SLEEVE TRAVEL	<u> </u>	ASSEMBLY GOVERNOR	2F11TI	V6
GOIDE SEEFAE INAVEE	I	Rated speed rpm	:	900
Rated speed rpm : 907 guide sleeve	1	rack travel mm		15.10
travel mm : 3.9		Rated speed rpm	:	962
Tolerance mm : $+$ 0.1	15 +	Tolerance 1/min	: +-	5
Ontrod arread man a 470	†	rack travel mm	:	4.00
Rated speed rpm : 630 guide sleeve	1	rack travel mm	•	0.50
travel mm : -6.8		Tolerance mm	: +-	0.50
Tolerance mm : + 0.2		Rated speed rpm		1000
	+			•••
Rated speed rpm : 1050	†	Rated speed rpm	:	901
<pre>guide sleeve travel mm : 17.2</pre>	· I	rack travel mm	: 1	15.10
Tolerance mm : +- 0.2		Rated speed rpm	•	963
TO CET GITTE HAIT	,	Tolerance 1/min	: +-	5
Rated speed rpm : 985	+	rack travel mm	:	4.00
guide sleeve	<u> </u>			
travel mm : 10.0		rack travel mm	:	0.50
Tolerance mm : + 0.2	²	Tolerance mm Rated speed rpm		0.50 1000
Rated speed rpm : 1050	1		-	
guide sleeve	+	Rated speed rpm	:	902
travel mm : 11.5		rack travel mm	: 1	5.10
Tolonopoo mm				
Tolerance mm : +- 0.5	u †	Rated speed rpm	:	964

Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 903 rack travel mm : 15.10 Rated speed rpm : 965 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 904 rack travel mm : 15.10 Rated speed rpm : 904 rack travel mm : 4.00 Rated speed rpm : 966 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance 1/min : + 5 rack travel mm : 967 Tolerance mm : + 0.50 Rated speed rpm : 905 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : 967 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : 967 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Rated speed rpm : 700 Rated speed rpm : 700 rack travel mm : 700 rack travel mm : 700 rack travel mm : 700 rack travel mm : 700
Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 903 rack travel mm : 15.10 Rated speed rpm : 965 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 904 rack travel mm : 4.00 Rated speed rpm : 966 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 905 rack travel mm : 905 Rated speed rpm : 905 rack travel mm : 15.10 Rated speed rpm : 905 rack travel mm : 0.50 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance 1/min : + 5 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : 4.00 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : 1000
rack travel mm : 15.10 Rated speed rpm : 965 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 904 rack travel mm : 15.10 Rated speed rpm : 966 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 905 rack travel mm : 905 rack travel mm : 967 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 0.50 Rated speed rpm : 700
Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 904 rack travel mm : 15.10 Rated speed rpm : 966 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 905 rack travel mm : 15.10 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 0.50 rack travel mm : 0.50 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : 4.00 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : 1000 TORQUE CONTROL Rated speed rpm : 700
Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 904 rack travel mm : 15.10 Rated speed rpm : 966 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 905 rack travel mm : 15.10 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance 1/min : + 5 rack travel mm : 0.50 Tolerance mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000
rack travel mm : 15.10 Rated speed rpm : 966 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 905 rack travel mm : 15.10 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 TORQUE CONTROL Rated speed rpm : 700
Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 Rated speed rpm : 905 rack travel mm : 15.10 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 TORQUE CONTROL Rated speed rpm : 700
Tolerance mm :
rack travel mm : 15.10 Rated speed rpm : 967 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 TORQUE CONTROL Rated speed rpm : 700
Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1000 TORQUE CONTROL Rated speed rpm : 700
Tolerance mm : + 0.50 Rated speed rpm : 1000 TORQUE CONTROL Rated speed rpm : 700
Rated speed rpm : 700
Tolerance mm : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST
SETTING

MEASUREMENT

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 12.50 + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 420 : 13.30 : ← 0.20

Pressure hPa : 680 rack travel mm : 15.05 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

:		-
:		500
:		221.0
:	+-	1.0
:	+-	4.0
		: : : +-

STARTING FUEL DELIVERY

Rated speed rpm :

rack travel mm	:	12.5
Tolerance mm	: +-	0.2
Del. quantity		
cm3/1000 strokes	:	130.
Tolerance		
cm3/1000 strokes	: +-	20.1
Check tolerance		
cm3/1000s	: +-	24 (

End of test specification sheet

Rated speed rpm : 500

Pressure hPa : 1500
rack travel mm : 16.15
Tolerance mm : + 0.05

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 30,05,95 Edition : ISO 4113 Test oil Combination No. : 0 402 648 944 Injection pump Pump designation : PE8P120A920/4LS7266 : -1 : 0 412 628 898 EP type number Governor Governer design. : RQ750PA758-15 Governer no. : 0 421 801 660 Cust. part No. : 1340528 Customer-spec. information : SCANIA Customer : DS 14 Motor TEST BENCH REQUIREMENTS : 4.1 Inlet line Vibration damper (RoBo diaphragm) : 3.2 Test oil inlet temp. °C 40 Tolerance °C 2.0 Overflow valve : 1 417 413 025 Inlet press. bar : 2.5

Outside diameter : 6.0 x inside diameter: 2.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm 5.05 : +- 0.50 Tolerance mm Check tolerance mm : +- 0.10 Rack travel in mm: 10.50 Tolerance mm : +- 1.50 Firing order : 1-2-7-3-4 : - 5- 6- 8 Phasing : 0-45-90-135-180 : -225-270-315 Tolerance : +- 0.30 Check tolerance °NW : + 0.50Start of delivery mark Barrel no. : 1 BASIC SETTING 700 Rated speed rpm : Rack travel in mm: 14.95 Tolerance mm : +- 0.05 Del. quantity cm3/1000 strokes : 287.0

Test lines : 1 680 750 008

bar

Test nozzle holde

Opening pressure

Tolerance bar

assembly

: 1 688 901 104

: 251.5 : + 1.5

Tolerance cm3/1000 strokes	: +- 1.0	†
	; 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm : 700
Spreed		
Tolerance		Del. quantity
cm3/1000 strokes	: 8.0	- cm3/1000 strokes : 287.0 Tolerance
Check tolerance		cm3/1000 strokes : + 1.0
cm3/1000s.	: 12.0	+ Check tolerance
		+ cm 3/1000s. : +- 4.0
Rack travel in m	n: 5.30	+ Spreed + Tolerance
Tolerance mm	": + 0.10	cm3/1000 strokes : 8.0
Del. quantity	30,10	- Check tolerance
cm3/1000 strokes	: 16.0	- cm3/1000s. : 12.0
Tolerance		+
cm3/1000 strokes	: + 4.0	†
Check tolerance cm3/1000s.	: ← 6.0	CONTROL LEVER
Spreed		- CONTINUE ELEVEN
Tolerance		+ control lever
cm3/1000 strokes	: 5.0	+ position degree : 36.0
Check tolerance cm3/1000s.	: 9.0	tolerance degree : +- 4.0
CM3/10003.	: 9.0	T control lever
		position degree : 88.0
(B) SETTING OF IN	NJECTION PUMP	+ tolerance degree : +- 4.0
WITH GOVERNOR		1
WITTI SOVEIMON		†
WITH SOVEWOR		ASSEMBLY COVERNOR SETTING
	/EL	- ASSEMBLY GOVERNOR SETTING
GUIDE SLEEVE TRAV		Rated speed rpm : 750
GUIDE SLEEVE TRAV	/EL : 759	Ì
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	: 759	Rated speed rpm : 750 rack travel mm : 13.90
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	: 759 : 6.36	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	: 759	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : +- 4
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	: 759 : 6.36	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 759 : 6.36 : ← 0.25 : 520	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 759 : 6.36 : ← 0.25 : 520	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 759 : 6.36 : + 0.25 : 520 : -5.69 : + 0.25	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : +- 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 850
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 759 : 6.36 : + 0.25 : 520 : −5.69 : + 0.25 : 850 : 16.58	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800
Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4
GUIDE SLEEVE TRAV Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm	: 759 : 6.36 : + 0.25 : 520 : −5.69 : + 0.25 : 850 : 16.58	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800
Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4
GUIDE SLEEVE TRAV Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25 : 798	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAV Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Tolerance mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25 : 798 : 10.00 : ← 0.25	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50
Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm Guide steeve travel mm Tolerance mm Rated speed rpm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25 : 798 : 10.00	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850
Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25 : 798 : 10.00 : ← 0.25 : 860	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 4.00 Rated speed rpm : 850 Rated speed rpm : 850 Rated speed rpm : 752
Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm guide steeve travel mm Tolerance mm Rated speed rpm Guide steeve travel mm Tolerance mm Rated speed rpm	: 759 : 6.36 : ← 0.25 : 520 : −5.69 : ← 0.25 : 850 : 16.58 : ← 0.25 : 798 : 10.00 : ← 0.25	Rated speed rpm : 750 rack travel mm : 13.90 Rated speed rpm : 799 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 751 rack travel mm : 13.90 Rated speed rpm : 800 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850

Tolerance 1/min rack travel mm	: +- 4 : 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm rack travel mm	
Rated speed rpm	: 802
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 13.90
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm rack travel mm	
Rated speed rpm	: 804
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 14.95
Tolerance mm	: + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
rack travel mm	: 14.95
Tolerance mm	: + 0.05

MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 11.00 : + 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 220 : 12.00 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.95 : + 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 11.00 : + 0.20
cm3/1000 strokes	: 130.0
Tolerance cm3/1000 strokes	: +- 20.0
Check tolerance cm3/1000s.	: + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.05.95 Test oil : ISO 4113

Combination No. : 0 402 648 963

Injection pump

Pump designation : PE8P120A920/4LS7266

: -1

: 0 412 628 898 EP type number

Governor

Governer design. : RQ900PA758-18 Governer no. : 0 421 801 687

Cust. part No. : 1340530

Customer-spec. information Customer : SCANIA : D 14 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 : +--Tolerance bar 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar $: \leftarrow 1.0$

Prestroke mm: 5.05 Tolerance mm : + 0.05Check

tolerance mm

: + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

: 0-45-90-135-180 Phasing : -225-270-315

: +- 0.30

Check

Tolerance

tolerance °NW : + 0.50

Start of delivery mark

Barrel no.

BASIC SETTING

Rated speed rpm

850

Rack travel in mm: 14.45 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes :

262.0

Tolerance cm3/1000 strokes : +- 1	.0	control lever position degree	•	87.N
Check tolerance cm3/1000s. : +- 4	.0	tolerance degree		4.0
Spreed Tolerance	-	ASSEMBLY GOVERNOR	SETTI	[NG
cm3/1000 strokes : 8		Rated speed rpm rack travel mm	:	900 13.40
Check tolerance : 12	.0	Rated speed rpm Tolerance 1/min rack travel mm	: +-	955 4 4.00
	30	+		
	10	rack travel mm	:	0.50
Del. quantity	_	Tolerance mm	: +-	0.50
cm3/1000 strokes : 16	.0	Rated speed rpm	:	1000
cm3/1000 strokes : +- 4	.0	Rated speed rpm	:	901
Check tolerance	_	rack travel mm	:	13.40
	.0	†		0=1
Spreed	-	Rated speed rpm	:	956
Tolerance	.0	Tolerance 1/min	: +-	4 00
cm3/1000 strokes : 5 Check tolerance	.0	rack travel mm	:	4.00
	.0	rack travel mm	•	0.50
CH3/ (0000: /	••	Tolerance mm	: +-	0.50
	-	Rated speed rpm		1000
(B) SETTING OF INJECTION P	UMP -	-	•	
WITH GOVERNOR	4	Rated speed rpm	:	902
	+	rack travel mm	:	13.40
	1	Data dan and aven		053
FULL LOAD DELTUEDY AT FULL	LOAD STOP	- Rated speed rpm	:	957
FULL LOAD DELIVERY AT FULL	LUAU STUP	Tolerance 1/min rack travel mm	: +-	4 4.00
Rated speed rpm : 850		L rack travet time	•	4.00
Aneroid pressure		rack travel mm	•	0.50
hPa : 1500	4	- Tolerance mm	: +-	0.50
Del. quantity	_	- Rated speed rpm	:	1000
cm3/1000 strokes : 262	.o 			
Tolerance	+	Rated speed rpm	:	903
	.0 	rack travel mm	:	13.40
Check tolerance	-			
	.0	- Rated speed rpm	:	958
Spreed	†	- Tolerance 1/min	: +-	4
Tolerance		- rack travel mm	:	4.00
	.0	mark denoted an	_	0.50
Check tolerance cm3/1000s. : 12		rack travel mm Tolerance mm		0.50
CIB/ 10003		- Rated speed rpm		1000
	1	- Nated Speed 1 pm	•	.000
		- Rated speed rpm	:	904
CONTROL LEVER	+	rack travel mm	:	13.40
	+			
control lever	_ +	- Rated speed rpm	:	959
position degree : 25		Tolerance 1/min	: +-	4
tolerance degree : +- 4	.u †	- rack travel mm	:	4.00
	†	- - rack travel mm		0.50
	7	י ומנת נומעפנ ושח	•	טניט

: +- 0.50 Tolerance mm Rated speed rpm 1000 905 Rated speed rpm rack travel mm 13.40 Rated speed rpm 960 Tolerance 1/min rack travel mm 4.00 rack travel mm 0.50 : + 0.50Tolerance mm Rated speed rpm : 1000

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 14.45
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 11.00
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 220 rack travel mm : 12.00 Tolerance mm : + 0.20

Pressure hPa : 510 rack travel mm : 13.95 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 177.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : ← 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.00 Tolerance mm : + 0.20 Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.08.95 Edition : ISO 4113 Test oil

Combination No. : 0 402 678 826

Injection pump

Pump designation : PE8P12OA32OLS7878-1

EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589

: 0 421 833 449 Governer no.

Cust. part No. : 9275722

Customer-spec. information Customer : LIEBHERR : D 9308 TI Motor Power KW : 330.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

: 105 min. L/h Tolerance l/h: + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 har : +- 1.5 Tolerance bar

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 4.55 : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : + 0.30

Check

: + 0.50tolerance °NW

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 13.30 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 259.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Canad	
Spreed Tolerance	- CONTROL LEVER
cm3/1000 strokes : 5.0	- CONTINUE LEVEN
	control lever
Check tolerance cm3/1000s. 9.0	position degree : 100.0
cm3/1000s. : 9.0	tolerance degree : +- 4.0
Rated speed rpm : 400	- RATED SPEED
Rack travel in mm: 4.75	rack travel mm : 12.30
Tolerance mm : + 0.20	Rated speed rpm : 940
Del. quantity	Tolerance 1/min : + 5
cm3/1000 strokes : 26.0	
Tolerance	- rack travel mm : 4.00 - Rated speed rpm : 990
Check tolerance	- Rated speed rpm : 970 - Tolerance 1/min : + 15
cm3/1000s. : + 6.0	
Spreed	- rack travel mm : 0.85
Tolerance	- Tolerance mm : + 0.55 - Rated speed rpm : 1160
Check tolerance	- Rated speed rpm : 1160
cm3/1000s. : 10.0	- rack travel mm : 4.00
+	- Rated speed rpm : 995
(B) SETTING OF INJECTION PUMP	-
WITH GOVERNOR	
1	- LOW IDLE
+	-
GUIDE SLEEVE POSITION	- - control lever
GOIDE SEEEVE ! OSITION	position degree : 76.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Park Annual in my c 0.50	
Rack travel in mm: 0.50	- Setting point w/out bumper spring
rocer arice min	Rated speed rpm : 400
governor spring	rack travel mm : 3.75
pre-tension +	• • • • • • • • • • • • • • • • • • •
click setting x : 4.00	Testing:
	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.75
Pated aread page a 000	Tolerance mm : +- 0.20
Rated speed rpm : 900 + Aneroid pressure	rack travel mm : 2.00
hPa : 1200	Rated speed rpm : 500
Del. quantity	Tolerance 1/min : + 30
cm3/1000 strokes : 259.0	
Tolerance + 1.0 + 1.0	TORQUE CONTROL
Check tolerance	TONGOE CONTINUE
cm3/1000s. : +- 4.0	Rated speed rpm : 900
Spreed	rack travel mm : 13.30
Tolerance + cm3/1000 strokes : 5.0	Tolerance mm : +- 0.05
Check tolerance	Rated speed rpm : 500
cm3/1000s. : 9.0	rack travel mm : 13.30
+	Tolerance mm : + 0.05
+	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 13.30
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 11.60
Tolerance mm : + 0.15

Rated speed rpm : 500

Pressure hPa : 930 rack travel mm : 13.10 Tolerance mm : + 0.05

Pressure hPa : 840 rack travel mm : 12.50 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200
Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 275.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 220.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0
Spreed
Tolerance

cm3/1000 strokes : 8.0

12.0

Check tolerance cm3/1000s. :

BREAKAWAY

Rack travel in mm: 12.30
Rated speed rpm: 940
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm 100 20.50 rack travel mm : : + 0.50Tolerance mm Del. quantity cm3/1000 strokes 215.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 400 4.75 rack travel mm Tolerance mm 0.20 Del. quantity cm3/1000 strokes 26.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.08.95 Edition Test oil : ISO 4113

Combination No. : 0 402 678 826A

Injection pump

Pump designation : PE8P120A320LS7878-1

EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589

Governer no. : 0 421 833 449

Cust. part No. : 9277414

Customer-spec. information Customer : LIEBHERR

Motor : D 9308 TI-E

Power KW : 330.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance *C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter: 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 : ← 0.05 Tolerance mm

Check

tolerance mm : ← 0.10

Rack travel in mm: 10.50 Tolerance m_0 : \leftarrow 1.50

: 1-8-7- 2- 6 : -3-5-4 Firing order

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm: 13.30 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 259.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	position degree : 100.0 tolerance degree : +- 4.0
Rated speed rpm : 400	RATED SPEED
Rack travel in mm: 4.75 Tolerance mm: +- 0.20 Del. quantity cm3/1000 strokes: 26.0 Tolerance	rack travel mm : 12.30 Rated speed rpm : 940 Tolerance 1/min : +- 5 rack travel mm : 4.00
cm3/1000 strokes : + 3.0 + Check tolerance + 7./1000s	Rated speed rpm : 990 Tolerance 1/min : + 15
cm3/1000s. : + 6.0 + Spreed	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1160 rack travel mm : 4.00
10.0	Rated speed rpm : 995
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever
Rated speed rpm : 800	position degree : 76.0 tolerance degree : + 4.0
Rack travel in mm: 0.50 † Tolerance mm: + 0.20 †	Setting point w/out bumper spring
governor spring + pre-tension +	Rated speed rpm : 400 rack travel mm : 3.75
click setting x : 4.00	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	Rated speed rpm : 400 rack travel mm : 4.75 Tolerance mm : +- 0.20
Aneroid pressure hPa : 1200 Del. quantity	rack travel mm : 2.00 Rated speed rpm : 500 Tolerance 1/min : + 30
cm3/1000 strokes : 259.0 + Tolerance cm3/1000 strokes : + 1.0 + 1.0	TORQUE CONTROL
Check tolerance cm3/1000s. : +- 4.0 + Spreed + Tolerance	Rated speed rpm : 900 rack travel mm : 13.30 Tolerance mm : + 0.05
cm3/1000 strokes : 5.0 + Check tolerance cm3/1000s. : 9.0 + Check tolerance cm3/1000s.	Rated speed rpm : 500
‡	rack travel mm : 13.30 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 1200 rack travel mm 13.30 Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa Rated speed rpm 500 11.60 rack travel mm Tolerance mm : + 0.10

500 Rated speed rpm

930 Pressure hPa 13.10 rack travel mm : + 0.05Tolerance mm

Pressure hPa 840 rack travel mm 12.50 : + 0.10 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 275.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 6.0

Aneroid pressure

hPa 550 Rated speed rpm Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0

: +--

Tolerance

Spreed

cm3/1000 strokes : 8.0 Check tolerance

cm3/1000s. 12.0

BREAKAWAY

Rack travel in mm: 12.30 Rated speed rpm Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100 20.50 rack travel mm : + - 0.50Tolerance mm Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 10.0Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 400 4.75 rack travel mm Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.08.95 Test oil : ISO 4113

Combination No. : 0 402 678 8260

Injection pump

Pump designation: PE8P120A320LS7878-1

EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589

: 0 421 833 449 Governer no.

: 9277816 Cust. part No.

Customer-spec. information Customer : LIEBHERR

: D 9408 T-E Motor

: 267.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

: 105 min. L/h Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +-1.0

4.55 Prestroke mm : + 0.05Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

: 0-45-90-135-180 Phasing

: -225-270-315 : +- 0.30

Tolerance

Check

tolerance "NW : + 0.50

BASIC SETTING

Rated speed rom 900

Rack travel in mm: 12.70 : + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 240.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +- 4.0

+	tolerance degree : + 4.0
Spreed	
Tolerance +	RATED SPEED
cm3/1000 strokes : 5.0	rack travel mm : 11.70
Check tolerance	Rated speed rpm : 940
cm3/1000s. : 9.0	Tolerance 1/min : +- 5
1	Total dilica in militima in a second
Rated speed rpm : 400	rack travel mm : 4.00
†	Rated speed rpm : 1000
Rack travel in mm: 4.75	Tolerance 1/min : + 15
Tolerance mm : + 0.20	0.05
Del. quantity	rack travel mm : 0.85
cm3/1000 strokes : 25.0 +	Tolerance mm : +- 0.55 Rated speed rpm : 1160
cm3/1000 strokes : + 3.0 +	Rated speed rpm : 1160
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 6.0	Rated speed rpm : 1020
Spreed	
Tolerance +	
cm3/1000 strokes : 6.0 +	
Check tolerance +	LOW IDLE
cm3/1000s. : 10.0 +	
†	aanhaat layaa
(B) SETTING OF INJECTION PUMP	control lever position degree : 76.0
WITH GOVERNOR	tolerance degree : +- 4.0
WITH GOVERNOON	toterance acgree 4.0
1	Setting point w/out bumper spring
+	
GUIDE SLEEVE POSITION	Rated speed rpm : 400
+	rack travel mm : 3.75
governor spring +	T
pre-tension + click setting x : 4.00 +	Testing:
click setting x : 4.00	Rated speed rpm : 400
	rack travel mm : 4.75
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.20
+	
Rated speed rpm : 900 +	rack travel mm : 2.00
Aneroid pressure +	Rated speed rpm : 500
hPa : 1100 +	Tolerance 1/min : + 30
Del. quantity tm3/1000 strokes : 240.0	
Tolerance	TORQUE CONTROL
cm3/1000 strokes : + 1.0	TOTAGE CONTINUE
Check tolerance	Rated speed rpm : 900
cm3/1000s. : + 4.0	rack travel mm : 12.70
Spreed	Tolerance mm : +- 0.05
Tolerance +	
cm3/1000 strokes : 5.0 +	Rated speed rpm : 500
Check tolerance	rack travel mm : 12.70
cm3/1000s. : 9.0	Tolerance mm : +- 0.05
Ī	
	ANEROID/ALTITUDE
CONTROL LEVER	COMPENSATOR TEST
+	
control lever	
position degree : 100.0	SETTING

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1100 : 12.70 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 11.20 +- 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 810 : 12.40 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 710 : 12.60 : + 0.10
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	: 1100
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1100 : 500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1100 : 500 : 253.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1100 : 500 : 253.0 : + 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 500 : 253.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 500 : 253.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1100 : 500 : 253.0 : + 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1100 : 500 : 253.0 : ← 3.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1100 : 500 : 253.0 : ← 3.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1100 : 500 : 253.0 : ← 3.0 : ← 6.0 : - 550 : 206.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1100 : 500 : 253.0 : ← 3.0 : ← 6.0 : – 550 : 206.0 : ← 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance	: 1100 : 500 : 253.0 : ← 3.0 : ← 6.0 : ← 6.0 : 550 : 206.0 : ← 1.0 : ← 4.0

BREAKAWAY

Rack travel in mm : 11.70
Rated speed rpm : 940
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	: +	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:	215.0
cm3/1000 strokes Check tolerance	: +-	10.0
cm3/1000s.	: +-	14.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm Del. quantity	: +-	400 4.75 0.20	
cm3/1000 strokes	:	25.0	
Tolerance			
	: +-	3.0	
cm3/1000s.	: +-	6.0	
cm3/1000 strokes	:	6.0	
Check tolerance		40.0	
cm3/TUBUS.	:	10.0	
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +-		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.08.95 Edition Test oil : ISO 4113

Combination No. : 0 402 678 8260

Injection pump

Pump designation : PE8P120A320LS7878-1

EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589

Governer no. : 0 421 833 449

Cust. part No. : 9278716

Customer-spec. information Customer : LIEBHERR : D 9308 TI-E Motor

: 340.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. 1/h : 105 Tolerance l/h: \leftarrow 10.0

Test nozz'e holde

: 1 688 901 105 assembly

Opening pressure

bar 208.5 : **←** 1.5 Tolerance bar

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 4.55 Prestroke mm : **←** 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

: 1-8-7-2-6 Firing order

: - 3- 5- 4

: 0-45-90-135-180 Phasing : -225-270-315

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 13.35 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 259.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: + 4.0

+	tolerance degree : +- 4.0
Spreed Tolerance cm3/1000 strokes : 5.0	RATED SPEED
	rack travel mm : 12.35
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 990 Tolerance 1/min : +- 5
Rated speed rpm : 400	rack travel mm : 4.00 Rated speed rpm : 1065
Rack travel in mm: 4.75 Tolerance mm: + 0.20	Tolerance 1/min : + 15
Del. quantity cm3/1000 strokes : 25.0	rack travel mm : 0.85 Tolerance mm : + 0.55
Tolerance + 3.0	Rated speed rpm : 1160
Check tolerance cm3/1000s. : + 6.0 Spreed	rack travel mm : 4.00 Rated speed rpm : 1075
Tolerance	
cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0	LOW IDLE
cm3/1000s. : 10.0	
+	control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 77.0 tolerance degree : +- 4.0
Ŧ	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 400
+	rack travel mm : 3.75
governor spring + pre-tension +	Testing:
click setting x : 4.00	_
	Rated speed rpm : 400 rack travel mm : 4.75
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.20
Rated speed rpm : 950	rack travel mm : 2.00
Aneroid pressure	Rated speed rpm : 500
hPa : 1400	Tolerance 1/min : + 30
Del. quantity + cm3/1000 strokes : 259.0 +	
Tolerance	TORQUE CONTROL
cm3/1000 strokes : + 1.0 + Check tolerance	Rated speed rpm : 950
cm3/1000s. : + 4.0	rack travel mm : 13.35
Spreed	Tolerance mm : +- 0.05
Tolerance + cm3/1000 strokes : 5.0 +	Rated speed rpm : 500
cm3/1000 strokes : 5.0 +	Rated speed rpm : 500 rack travel mm : 13.35
cm3/1000s. : 9.0	Tolerance mm : + 0.05
	ANEROID/ALTITUDE
CONTROL LEVER	COMPENSATOR TEST
control lever position degree : 102.0	SETTING
position degree : 102.0 +	OCCUTING

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1400 : 13.35 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 : 11.50 : ← 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 920 : 12.80 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 800 : 11.80 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
FUEL DELIVERY CHA	
Aneroid pressure hPa Rated speed rpm	: 1400
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1400 : 500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1400 : 500 : 273.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1400 : 500 : 273.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1400 : 500 : 273.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1400 : 500 : 273.0 : +- 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1400 : 500 : 273.0 : +- 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1400 : 500 : 273.0 : +- 3.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1400 : 500 : 273.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1400 : 500 : 273.0 : +- 3.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1400 : 500 : 273.0 : +- 3.0 : +- 6.0 : 550 : 217.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1400 : 500 : 273.0 : + 3.0 : + 6.0 : - 550 : 217.0 : + 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1400 : 500 : 273.0 : + 3.0 : + 6.0 : - 550 : 217.0 : + 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance	: 1400 : 500 : 273.0 : + 3.0 : + 6.0 : - 550 : 217.0 : + 1.0 : + 4.0

12.35

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 215.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 400 4.75 rack travel mm Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

End of test specification sheet

Rack travel in mm: 1
Rated speed rpm: 9
Tolerance 1/min: +

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.08.95 Edition Test oil : ISO 4113

Combination No. : 0 402 678 826E

Injection pump

Pump designation : PE8P120A320LS7878-1

EP type number : 0 412 628 906

Governor

Governer design. : RSV400...1000P1A589

: 0 421 833 449 Governer no.

Cust. part No. : 9279387

Customer-spec. information : LIEBHERR Customer : D 9308 TI-E Motor

Power KW : 317.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 105 Tolerance 1/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : \leftarrow 1.0

4.55 Prestroke mm : **←** 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

: 0-45-90-135-180 Phasing

: -225-270-315 : + 0.30

Tolerance Check

tolerance "NW : + - 0.50

BASIC SETTING

900 Rated speed rpm

13.00 Rack travel in mm: : + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 251.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

4.0

<u> </u>	tolerance degree : +- 4.0
Spreed +	
Tolerance + cm3/1000 strokes : 5.0 +	RATED SPEED
cms/1000 strokes : 5.0	rack travel mm : 12.00
Check tolerance	Rated speed rpm : 940
cm3/1000s. : 9.0	Tolerance 1/min : + 5
+	
Rated speed rpm : 400	rack travel mm : 4.00
Park Angual in mr. 4 75	Rated speed rpm : 990
Rack travel in mm: 4.75 Tolerance mm: +- 0.20	Tolerance 1/min : + 15
Del. quantity	rack travel mm : 0.85
cm3/1000 strokes : 26.0	Tolerance mm : + 0.55
Tolerance	Rated speed rpm : 1160
cm3/1000 strokes : +- 3.0	
Check tolerance + 6.0 +	rack travel mm : 4.00 Rated speed rpm : 995
cm3/1000s. : + 6.0 + Spreed +	Rated speed rpm : 995
Tolerance	
cm3/1000 strokes : 6.0	
Check tolerance	LOW IDLE
cm3/1000s. : 10.0	
1	control lever
(B) SETTING OF INJECTION PUMP	position degree : 70.0
WITH GOVERNOR	tolerance degree : + 4.0
+	
†	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 400
00105 055545 1 00111014	rack travel mm : 3.75
governor spring +	
pre-tension +	Testing:
click setting x : 4.00	Rated speed rpm : 400
	Rated speed rpm : 400 rack travel mm : 4.75
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.20
+	
Rated speed rpm : 900 +	rack travel mm : 2.00
Aneroid pressure	Rated speed rpm : 500
hPa : 1200 + Del. quantity +	Tolerance 1/min : ← 30
cm3/1000 strokes : 251.0	
Tolerance	TORQUE CONTROL
cm3/1000 strokes : + 1.0 +	
Check tolerance	Rated speed rpm : 900
cm3/1000s. : +- 4.0 +-	rack travel mm : 13.00 Tolerance mm : +- 0.05
Tolerance	roterance min
cm3/1000 strokes : 5.0	Rated speed rpm : 500
Check tolerance	rack travel mm : 13.00
cm3/1000s. : 9.0	Tolerance mm : \leftarrow 0.05
1	
	ANEROID/ALTITUDE
CONTROL LEVER	COMPENSATOR TEST
+	
control lever	CETTING
position degree : 94.0 +	SETTING

M03

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: +	500 1200 13.00 0.05
MEASUREMENT		
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: +	500 11.30 - 0.10

500 Rated speed rpm :

Pressure hPa 800 12.50 rack travel mm Tolerance mm : **←** 0.05

Pressure hPa 700 11.60 rack travel mm : + - 0.10Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa Rated speed rpm 500

Del. quantity cm3/1000 strokes : 263.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s.6.0

Aneroid pressure

hPa 550 Rated speed rpm Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes 1.0 Check tolerance cm3/1000s. 4.0

Spreed Tolerance

cm3/1000 strokes 8.0

Check tolerance

12.0 cm3/1000s.

BREAKAWAY

12.00 Rack travel in mm: Rated speed rpm : Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100 20.50 rack travel mm : + 0.50Tolerance mm Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 400 rack travel mm 4.75 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.08.95 Test oil : ISO 4113

Combination No. : 0 402 746 931

Injection pump

Pump designation : PES6P120A320RS7236 EP type number : 0 412 726 848

Governor

Governer design. : RQV275...1000PA1001

: -2

: 0 421 813 989 Governer no.

Cust. part No. : CCEP5128A 66-194

Customer-spec. information

Customer : RVI

: MIDR 063540 N/3 Motor Power KW : 283.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temo. °C Tolerance °C

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar :+ 1.0

Prestroke mm : 4.55 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 19.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: ← 0.30 Tolerance

Check

: +- 0.50 tolerance "NW

Start of delivery mark

Barrel no. 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: -7.25 Tolerance mm : \leftarrow 0.30

Del. quantity

cm3/1000 strokes : 74.0

Tolerance cm3/1000 strokes :	+ 1.0	Rated speed rpm : Rack travel in mm :	1190
Check tolerance cm3/1000s. :	+ 4.0		+ 1.30
Spreed	$\frac{1}{1}$	FULL LOAD DELIVERY	AT FULL LOAD STOP
Tolerance cm3/1000 strokes :	4.0	Rated speed rpm : Aneroid pressure hPa :	600 1000
Check tolerance cm3/1000s. :	7.0	Del. quantity cm3/1000 strokes : Tolerance	
Rated speed rpm :	600	cm3/1000 strokes : Check tolerance	+ 2.0
Rack travel in mm : Tolerance mm :	13.35 + 0.05	cm3/1000s. : Spreed Tolerance cm3/1000 strokes :	+- 5.0 8.0
Del. quantity cm3/1000 strokes :	290.0	Check tolerance cm3/1000s.	12.0
Tolerance cm3/1000 strokes :	+ 2.0	CONTROL LEVER	
Check tolerance cm3/1000s.	+ 5.0	control lever position degree :	301.0
Spreed Tolerance cm3/1000 strokes :	8.0	tolerance degree :	
Check tolerance cm3/1000s.	12.0	rack travel mm : Rated speed rpm :	−1.00 1070 + 5
Rated speed rpm :	300	rack travel mm :	-9.30
Rack travel in mm : Tolerance mm : Del. quantity	-8.20 + 0.20	Rated speed rpm : Tolerance 1/min :	1205 +- 15
cm3/1000 strokes : Tolerance cm3/1000 strokes :	+	Tolerance mm :	-12.85 +- 0.55 1350
Check tolerance cm3/1000s.	+ 5.0	Nated Speed I pin	1330
Spreed Tolerance cm3/1000 strokes :	6.0	LOW IDLE	
Check tolerance cm3/1000s.	10.0	control lever position degree :	
(B) SETTING OF INJECTION WITH GOVERNOR	CTION PUMP	tolerance degree : Testing:	+- 4.0
GUIDE SLEEVE POSITIO	W +	rack travel mm :	300 -8.20 +- 0.10

Rated speed rpm CRT mm max. Rated speed rpm	: < -6.80	+ Aneroid pressure + hPa : 1000 + Rated speed rpm : 1000 + Del. quantity + cm3/1000 strokes : 270.0
TORQUE CONTROL		Tolerance : + 4.0 Check tolerance
Rated speed rpm	: 600	+ cm3/1000s. : +- 7.0
Rated speed rpm Tolerance mm	: 1000 : +- 0.10	+ Aneroid pressure + hPa : - Rated speed rpm : 600 + Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 600 : -4.50 : + 0.10	cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 5.0
ANEROID/ALTITUDE COMPENSATOR TEST		hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance
SETTING		cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm Pressure hPa	: 500 : 1000	Aneroid pressure hPa : - Rated speed rpm : 500
MEASUREMENT		+ Del. quantity + cm3/1000 strokes : 167.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: -3.80	Tolerance : + 1.0 check tolerance cm3/1000s. : + 4.0
Rated speed rpm	: 500	# BREAKAWAY
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: -2.60	Rack travel in mm: -1.00 Rated speed rpm: 1070 Tolerance 1/min: + 5
START CUT-OUT		STARTING FUEL DELIVERY
Rated speed rpm Rated speed rpm		Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 10.0
Check speed 1/min Check speed 1/min		Check tolerance : + 14.0
FUEL DELIVERY CHA		LOW IDLE

Rated speed rpm : 300

ra	ck travel mm	:		-8.20
To	lerance mm	:	+	0.20
De	l. quantity			
CIT	3/1000 strokes	:		31.0
To	lerance			
CM	3/1000 strokes	:	+-	2.5
Ch	eck tolerance			
cm	3/1000s.	:	+	5.0
Sp	reed			
To	lerance			
cm	3/1000 strokes	:		6.0
Ch	eck tolerance			
cm	3/1000s.	:		10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.08.95 Test oil : ISO 4113

Combination No. : 0 403 244 054

Injection pump

Pump designation : PES4MW100/720RS1525 EP type number : 0 413 204 022

Governor

Governer design. : RQV300...1300MW150

Governer no. : 0 420 083 334

Cust. part No. : 0260747002

Customer—spec. information Customer : MB-NFZ Motor : OM364LA Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

tolerance mm

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05
Check

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

: + 0.10

Phasing : 0-90-180-270 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.90 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 126.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Charle Antonomes	1	
Check tolerance cm3/1000s.	: 6.0	Rack travel in mm : 10.00
CIID/ 1000s.	· •••	Tolerance mm : +- 2.70
Rated speed rpm	: 300	TO CO. GIFTO THE CO. T. C. T.
	+	
Rack travel in mm		FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm	: +- 0.30 +	Detail aread man . 4700
Del. quantity cm3/1000 strokes	: 12.0	Rated speed rpm : 1300 Aneroid pressure
Tolerance	1	hPa : 1200
cm3/1000 strokes	: ← 2.0 +	Del. quantity
Check tolerance	+	cm3/1000 strokes : 126.0
cm3/1000s.	: +- 4.5	Tolerance
Spreed Tolerance	†	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes	: 3.5	cm3/1000s. : +- 3.0
Check tolerance		Spreed
cm3/1000s.	: 5.5	Tolerance
	+	cm3/1000 strokes : 3.5
(2)	+	Check tolerance
(B) SETTING OF IN	JECTION PUMP	cm3/1000s. : 6.0
WITH GOVERNOR	Ī	
GUIDE SLEEVE TRAV	EL 🗼	CONTROL LEVER
	+	
Rated speed rpm	: 300	control lever
guide sleeve travel mm	: 0.91	position degree : 105.0
Tolerance mm	: +- 0.20	RATED SPEED
	+	
Rated speed rpm	: 1354	rack travel mm : 12.90
guide sleeve	†	Rated speed rpm : 1345
travel mm Tolerance mm	: 7.15 : + 0.15	Tolerance 1/min : +- 5
roterance man	· - 0.13	rack travel mm : 4.00
Rated speed rpm	: 1130	Rated speed rpm : 1475
guide sleeve	+	Tolerance 1/min : + 15
travel mm	: 5.40	
Tolerance mm	: +- 0.25	rack travel mm : 0.50
Rated speed rpm	: 780	Tolerance mm : + 0.50 Rated speed rpm : 1550
guide sleeve	. 700	Mateu Specu (piii : 1550
travel mm	: 3.72	
Tolerance mm	: + 0.25	
	†	LOW IDLE
Rated speed rpm	: 1679	
guide sleeve travel mm	: 12.00 I	control lever
Tolerance mm	: + 0.25	position degree : 66.0
	+	•
Rated speed rpm	: 1780	Testing:
guide sleeve	+ 17.50	Dated award average 700
travel mm	: 13.50 + : ← 0.50 +	Rated speed rpm : 300 rack travel mm : 3.90
Tolerance mm	T	Tolerance mm : + 0.10
GUIDE SLEEVE POSIT	rion +	Rated speed rpm : 200
Dotad annual annual	. 1/75	CRT mm min. : > 4.50
Rated speed rpm	: 1475 +	CRT mm min. :> 4.50

		† Tolerance
TORQUE CONTROL		cm3/1000 strokes : + 1.5 + Check tolerance
render donnier		+ cm3/1000s. : +- 4.0
Rated speed rpm		+ Spreed
rack travel mm		+ Tolerance
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 6.0
Ontard on and one	. 750	Check tolerance
Rated speed rpm	: 750 : 13.90	+ cm3/1000s. : 9.0
rack travel mm Tolerance mm	: + 0.10	Aneroid pressure
IOCEI ance min	. +- 8.10	+ hPa : -
		Rated speed rpm : 500
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		- cm3/1000 strokes : 67.0
		+ Tolerance
		- cm3/1000 strokes : +- 1.0
SETTING		- Check tolerance
maked one to		+ cm3/1000s. : +- 3.0
Rated speed rpm		†
Pressure hPa rack travel mm		BREAKAWAY
rack travet mm Tolerance mm	: +- 0.05	T DREADAWN!
TOTAL OF INTERPRETATION	0.03	1
MEASUREMENT		Rack travel in mm: 12.90
		Rated speed rpm : 1345
Pressure hPa	: -	Tolerance 1/min : + 5
Rated speed rpm	: 500	†
Tolerance mm	: + 0.10	†
Dakad ame-d uu-	. 500	CTARTIAL FUEL DEL TUERU
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa	: 600	Rated speed rpm : 100
rack travel mm	2.09	Del. quantity
Tolerance mm		- cm3/1000 strokes : 150.0
		+ Tolerance
Pressure hPa	: 350_	- cm3/1000 strokes : + 5.0
rack travel mm	: 0.50	+ Check tolerance
Tolerance mm	: ← 0.10	+ cm3/1000s. : + 8.0
		†
START CUT-OUT		Į
Nadad and the	400	1011 701 5
Rated speed rpm	: > 100 : < 220	LOW IDLE
Rated speed rpm	: < 220	+ Rated speed rpm : 300
Check		rack travel mm : 3.90
speed 1/min	: > 80	Tolerance mm : + 0.30
Check	we we	+ Del. quantity
speed 1/min	: < 260	+ cm3/1000 strokes : 12.0
• • • • • • • • • • • • • • • • • • • •		+ Tolerance
		+ cm3/1000 strokes : + 2.0
FUEL DELIVERY CHA	RACTERISTICS	+ Check tolerance
		+ cm3/1000s. : + 4.5
Aneroid pressure	4200	Spreed
nPa	: 1200 : 750	+ Tolerance
	· / ነበ	+ cm3/1000 strokes : 3.5
Rated speed rpm	. 135	I Chook tolonomen
el. quantity m3/1000 strokes		+ Check tolerance + cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.08.95 Edition : ISO 4113 Test oil

Combination No. : 0 403 246 050

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RQV300...1300MW132

: -16

: 0 420 083 335 Governer no.

Cust. part No. : 0260749302

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

1.5 Inlet press. bar :

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar 1.5 Tolerance bar

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-1.0

: 4.55 Prestroke mm : + 0.05Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 20.00 Tolerance mm : \leftarrow 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance 'NW : +- 0.75

BASIC SETTING

1300 Rated speed rpm :

13.30 Rack travel in mm :

: **←** 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed Tolerance

3.5 cm3/1000 strokes :

	+ Rated speed rpm : 1480
Check tolerance cm3/1000s. : 6.0	Rack travel in mm: 10.00
Rated speed rpm : 300	Toterance min . 7- 2.70
Rack travel in mm: 3.80 Tolerance mm: + 0.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 12.0	Rated speed rpm : 1300 Aneroid pressure
Tolerance cm3/1000 strokes : +- 2.0	hPa : 1000 Del. quantity
Check tolerance cm3/1000s. : +- 4.5	cm3/1000 strokes : 118.0 Tolerance
Spreed Tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 3.5 Check tolerance	cm3/1000s. : + 3.0 Spreed
cm3/1000s. : 5.5	Tolerance cm3/1000 strokes : 3.5
(B) SETTING OF INJECTION PUMP	Check tolerance cm3/1000s. : 6.0
WITH GOVERNOR	
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 300 guide sleeve	control lever position degree : 119.0
travel mm : 1.01 Tolerance mm : + 0.20	tolerance degree : + 4.0
	RATED SPEED
guide sleeve	rack travel mm : 12.30
travel mm : 6.70 Tolerance mm : + 0.15	Rated speed rpm : 1345 Tolerance 1/min : + 5
Rated speed rpm : 1090 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1470
travel mm : 4.70	Tolerance 1/min : + 15
Tolerance mm : + 0.25	rack travel mm : 0.50
Rated speed rpm : 690 guide sleeve	Tolerance mm : + 0.50 Rated speed rpm : 1550
travel mm : 2.97 Tolerance mm : + 0.25	‡
Rated speed rpm : 1683	LOW IDLE
guide sleeve travel mm : 12.00	*
Tolerance mm : + 0.25	control lever position degree : 74.0
Rated speed rpm : 1780 guide sleeve	tolerance degree : + 4.0
travel mm : 13.50 Tolerance mm : + 0.50	† Testing:
	Rated speed rpm : 300 rack travel mm : 3.80
GUIDE SLEEVE POSITION	+ Tolerance mm : +- 0.10

Rated speed rpm CRT mm min. Rated speed rpm rack travel mm	: > 4.10 : 490	Aneroid pressure hPa : 1000 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 119.0 Tolerance cm3/1000 strokes : + 1.5
TORQUE CONTROL		Check tolerance cm3/1000s. : + 4.0 Spreed
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 13.30 : + 0.05	Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.30 : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes : 48.0 Tolerance cm3/1000 strokes : + 1.0
SETTING		Check tolerance cm3/1000s. : + 3.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1000 : 13.30	BREAKAWAY Rack travel in mm: 12.30 Rated speed rpm: 1345
Pressure hPa Rated speed rpm Tolerance mm	: 500	Tolerance 1/min : +- 5
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 500 : 3.00 : + 0.10 : 300 : 1.00	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
START CUT-OUT		1011 701 5
Rated speed rpm Rated speed rpm		+ LOW IDLE - Rated speed rpm : 300 - rack travel mm : 3.80
Check speed 1/min Check	:> 80	Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0
speed 1/min	: < 220	Tolerance cm3/1000 strokes : + 2.0 Check tolerance
FUEL DELIVERY CHA	RACTERISTICS	+ cm3/1000s. : + 4.5 + Spreed

Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : 3.5

5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25,08,95 Edition Test oil : ISO 4113

Combination No. : 0 403 246 052

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RQV300...1300MW132

: -19

: 0 420 083 338 Governer no.

Cust. part No. : 0260749202

Customer-spec. information : MB-NFZ Customer : 0M366LA Motor Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar :

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm 4.55 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 20.00 Tolerance m_0 : +- 1.00

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300 : + 0.50

Tolerance

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm 1300

13.30 Rack travel in mm:

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.: +-3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

M17

		+ Rated speed rpm : 1480
Check tolerance cm3/1000s.	: 6.0	+ Rack travel in mm : 10.00 Tolerance mm : + 2.70
Rated speed rpm	: 300	Total disc limit
Rack travel in m Tolerance mm Del. quantity		FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300
cm3/1000 strokes Tolerance	: 12.0	+ Rated speed rpm : 1300 + Aneroid pressure + hPa : 1000
cm3/1000 strokes Check tolerance	: +- 2.0	Del. quantity - cm3/1000 strokes : 118.0
cm3/1000s. Spreed	: +- 4.5	+ Tolerance + cm3/1000 strokes : + 1.0
Tolerance cm3/1000 strokes	: 3,5	Check tolerance cm3/1000s. : + 3.0
Check tolerance cm3/1000s.		Spreed Tolerance
		cm3/1000 strokes : 3.5 Check tolerance
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	+ cm3/1000s. : 6.0
GUIDE SLEEVE TRAV	/EL	CONTROL LEVER
Rated speed rpm guide sleeve	: 300	control lever position degree : 119.0
travel mm Tolerance mm	: 1.01 : + 0.20	tolerance degree : + 4.0
Rated speed rpm	: 1353	RATED SPEED
guide sleeve travel mm Tolerance mm	: 6.70 : + 0.15	+ rack travel mm : 12.30 + Rated speed rpm : 1345 + Tolerance 1/min : + 5
Rated speed rpm guide sleeve	: 1090	rack travel mm : 4.00 Rated speed rpm : 1470
travel mm Tolerance mm	: 4.70 : ← 0.25	Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 2.97	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550
Rated speed rpm	: 1683	LOW IDLE
guide sleeve travel mm Tolerance mm		t control lever
Rated speed rpm	: 1780	position degree : 74.0 tolerance degree : +- 4.0
guide sleeve travel mm Tolerance mm	: 13.50	Testing:
GUIDE SLEEVE POSI		Rated speed rpm : 300 rack travel mm : 3.80 Tolerance mm : + 0.10

Rated speed rpm CRT mm min.	: > 4.10	Aneroid pressure hPa : 1000 Rated speed rpm : 600 Del. quantity
Rated speed rpm rack travel mm	: 490 : 2.00	+ cm3/1000 strokes : 119.0 + Tolerance + cm3/1000 strokes : + 1.5
TORQUE CONTROL		
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 13.30 : +- 0.05	Tolerance + cm3/1000 strokes : 6.0 + Check tolerance + cm3/1000s. : 9.0
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.30 : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes : 48.0 Tolerance cm3/1000 strokes : + 1.0
SETTING		Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1000 : 13.30	BREAKAWAY
MEASUREMENT		Rack travel in mm: 12.30 Rated speed rpm: 1345 Tolerance 1/min: + 5
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : + 0.10	STARTING FUEL DELIVERY
Rated speed rpm	: 500	Rated speed rpm : 100
Pressure hPa rack travel mm Tolerance mm	: 3.00	Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 5.0
Pressure hPa rack travel mm Tolerance mm	: 300 : 1.00 : + 0.10	Check tolerance cm3/1000s. : + 8.0
START CUT-OUT	**************************************	LOW IDLE
Rated speed rpm Rated speed rpm		Rated speed rpm : 300 rack travel mm : 3.80
Check speed 1/min Check	: > 80	Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0
speed 1/min	: < 220	Tolerance + cm3/1000 strokes : + 2.0 - Check tolerance
FUEL DELIVERY CHA	RACTERISTICS	cm3/1000s. : + 4.5 Spreed

Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. :

3.5

5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.08.95 Test oil : ISO 4113

Combination No. : 0 403 246 053

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RQV300...1300MW132

: -20

Governer no. : 0 420 083 339

Cust. part No. : 0260749402

Customer—spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.40
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 4.0

Spreed Tolerance

cm3/1000 strokes : 4.0

	+ Rated speed rpm : 1480
Check tolerance	+ Mateca opecia i piii . 1400
cm3/1000s. : 7.5	+ Rack travel in mm: 10.00
Rated speed rpm : 300	Tolerance mm : +- 2.70
Rated speed rpm : 300	
Rack travel in mm: 4.00	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.30	+
Del. quantity	+ Rated speed rpm : 1300
cm3/1000 strokes : 12.0 Tolerance	+ Aneroid pressure + hPa : 1000
cm3/1000 strokes : +- 2.0	- Del. quantity
Check tolerance	+ cm3/1000 strokes : 130.0
cm3/1000s. : +- 4.5	+ Tolerance
Spreed Tolerance	t cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 3.5	+ cm3/1000s. : +- 4.0
Check tolerance	Spreed
cm3/1000s. : 5.5	Tolerance
	+ cm3/1000 strokes : 4.0
(B) SETTING OF INJECTION PUMP	+ Check tolerance + cm3/1000s. : 7.5
WITH GOVERNOR	1.5
	+
CURRE OF EMILE TORUET	CONTROL A SUFF
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 300	+ control lever
guide sleeve	position degree : 120.0
travel mm : 1.07	tolerance degree : + 4.0
Tolerance mm : + 0.20	+ RATED SPEED
Rated speed rpm : 1354	T KATED SPEED
guide sleeve	rack travel mm : 13.40
travel mm : 6.71	+ Rated speed rpm : 1345
Tolerance mm : + 0.15	† Tolerance 1/min : + 5
Rated speed rpm : 1090	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1480
travel mm : 4.70	+
Tolerance mm : + 0.25	+ rack travel mm : 0.50
Rated speed rpm : 690	+ Tolerance mm : + 0.50 + Rated speed rpm : 1550
guide steeve	Hatea Speed 1 pile : 1330
travel mm : 2.97	+
Tolerance mm : + 0.25	1.01.70.5
Rated speed rpm : 1683	† LOW IDLE
guide sleeve	I
travel mm : 12.00	control lever
Tolerance mm : + 0.25	position degree : 74.0
Debug aread page 4700	tolerance degree : + 4.0
Rated speed rpm : 1780 guide sleeve	Testing:
travel mm : 13.50	resting.
Tolerance mm : + 0.50	Rated speed rpm : 300
	+ rack travel mm : 4.00
CHINE SLEENE DOSTITON	Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	Rated speed rpm : 200
	· · · · · · · · · · · · · · · · · · ·

CRT mm min. : > 4.50	- Del. quantity - cm3/1000 strokes : 132.0 - Tolerance
TORQUE CONTROL	- cm3/1000 strokes : +- 2.0 - Check tolerance
Rated speed rpm : 1300	- cm3/1000s. : +- 5.0 - Spreed
rack travel mm : 14.40 Tolerance mm : + 0.05	- Tolerance - cm3/1000 strokes : 6.0 - Check tolerance
Rated speed rpm : 750 rack travel mm : 14.40 rolerance mm : + 0.10	- cm3/1000s. : 9.0
Toterance mm : + U.1U	- Aneroid pressure - hPa : - - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	- Del. quantity - cm3/1000 strokes : 43.0
SETTING	- Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
+	cm3/1000s. : + 3.0
Rated speed rpm : 500 Pressure hPa : 1000	
rack travel mm : 14.40 Tolerance mm : + 0.10	BREAKAWAY
MEASUREMENT	Rack travel in mm : 13.40 Rated speed rpm : 1345
Pressure hPa : - + + + + + + + + + + + + + + + + + +	Tolerance 1/min : + 5
Tolerance mm : + 0.10	•
Rated speed rpm : 500	STARTING FUEL DELIVERY
Pressure hPa : 600 + rack travel mm : 4.20 +	Rated speed rpm : 100 Del. quantity
Tolerance mm : + 0.10	cm3/1000 strokes : 160.0 Tolerance
Pressure hPa : 300	cm3/1000 strokes : +- 5.0
rack travel mm : 1.50 + Tolerance mm : + 0.10 +	Check tolerance cm3/1000s. : + 8.0
START CUT-OUT	
Rated speed rpm : > 100	LOW IDLE
Rated speed rpm : < 200 +	Rated speed rpm : 300
Check + speed 1/min :> 80 +	rack travel mm : 4.00 Tolerance mm : +- 0.30
speed 1/min :> 80 +	Del. quantity
speed 1/min : < 220	cm3/1000 strokes : 12.0 Tolerance
FUEL DELIVERY CHARACTERISTICS	<pre>cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5</pre>
Aneroid pressure	Spreed
hPa : 1000 + Rated speed rpm : 750 +	Tolerance cm3/1000 strokes : 3.5
T	

Check tolerance cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.08.95 Edition Test oil : ISO 4113

Combination No. : 0 403 274 007

Injection pump

Pump designation : PES4MW100/720RS1524

: 0 413 204 021 EP type number

Governor

Governer design. : RSV350...1200MW0A356

: -2

: 0 420 085 273 Governer no.

Cust. part No. : 0260748302

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

rest pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 4.55 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

: ← 0.50 Tolerance Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 11.15 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 86.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 6.0 +	tolerance degree : +- 4.0
Rated speed rpm : 350 +	RATED SPEED
nated speed (piii : 350	rack travel mm : 10.15
Rack travel in mm: 4.00	Rated speed rpm : 1245
Tolerance mm : + 0.30 +	Tolerance 1/min : +- 5
Del. quantity + cm3/1000 strokes : 12.0 +	rack travel mm : 1.00
Tolerance	Tolerance mm : + 0.70
cm3/1000 strokes : + 2.0 +	Rated speed rpm : 1400
Check tolerance +	
cm3/1000s. : + 4.5	
Tolerance	LOW IDLE
cm3/1000 strokes : 3.5	
Check tolerance	Setting point w/out bumper spring
cm3/1000s. : 5.5	Rated speed rpm : 350
Ī	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	Testing:
Ŧ	Rated speed rpm : 100
GUIDE SLEEVE POSITION	CRT mm min. : > 19.50
GOIDE SLEEVE POSITION	CAT HILL MITTS
Rated speed rpm : 800	
Rack travel in mm: 0.65	TORQUE CONTROL
Tolerance mm : + 0.35	Rated speed rpm : 1200
	rack travel mm : 11.15
governor spring +	Tolerance mm : + 0.05
pre-tension + click setting x : 4.50 +	Rated speed rpm : 750
terior secting x . 4.50	rack travel mm : 11.15
	Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1200	ANEROID/ALTITUDE
Aneroid pressure +	COMPENSATOR TEST
hPa : 1400 +	
cm3/1000 strokes : 86.0	SETTING
Tolerance	
cm3/1000 strokes : + 1.0	Rated speed rpm : 500
Check tolerance + 3.0 +	Pressure hPa : 1400 rack travel mm : 11.15
Spreed	Tolerance mm : + 0.10
Tolerance	
cm3/1000 strokes : 3.5	MEASUREMENT
Check tolerance + cm3/1000s. : 6.0 +	Pressure hPa : -
1,000	Rated speed rpm : 500
+	Tolerance mm : + 0.10
CONTROL LEVER	Rated speed rpm : 500
CONTROL LEVER	Rated speed rpm : 500
control lever	Pressure hPa : 250
position degree : 103.0 +	rack travel mm : 0.25

Tolerance mm	: +- 0.10
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1400 : 750
Del. quantity cm3/1000 strokes	: 80.0
Tolerance cm3/1000 strokes Check tolerance	: ← 1.5
cm3/1000s.	: + 4.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 7.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: - : 500 : 71.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: - 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 10.15 : 1245 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity	: 100
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance	: ← 5.0
cm3/1000s.	: + 8.0
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.00 : +- 0.30

Del. quantity		
cm3/1000 strokes	:	12.0
Tolerance		
cm3/1000 strokes	: +	2.0
Check tolerance		
cm3/1000s.	; +-	4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance		
cm3/1000s.	:	5.5
	-	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 14.08.95

Test oil

: ISO 4113

Combination No. : 0 403 276 013

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RSV350...1200MW0A390

: 0 420 085 276 Governer no.

Cust. part No. : 0260749002

Customer-spec. information Customer : MB-NFZ : 0M366LA Motor

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm

4.55

Tolerance mm

: + 0.05

Check

tolerance mm

: + 0.10

Rack travel in mm: 20.00

Tolerance mm : +- 1.00

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300 : + 0.50

Tolerance

Check

tolerance "NW

: + 0.75

BASIC SETTING

Rated speed rpm :

1200

Rack travel in mm: 13.30

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: +-3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

		+		
Check tolerance		Ì	control lever	
cm3/1000s. :	6.0	+	position degree	: 108.0
		+	tolerance degree	: + 4.0
Rated speed rpm :	350	+	_	
·		+	RATED SPEED	
Rack travel in mm:	3.90	+		
Tolerance mm :	← 0.30	+	rack travel mm	: 1.00
Del. quantity		+	Tolerance mm	: +- 0.70
cm3/1000 strokes :	12.0	+	Rated speed rpm	: 1450
Tolerance		+	i //	
cm3/1000 strokes :	+- 2.0	+	rack travel mm	: 4.00
Check tolerance		1	Rated speed rpm	: 1375
cm3/1000\$:	+- 4.5	+	·	
Spreed		+	rack travel mm	: 12.30
Tolerance		+	Rated speed rpm	
cm3/1000 strokes :	3.5	1	Tolerance 1/min	
Check tolerance		1		
cm3/1000s. :	5.5	Ţ	ASSEMBLY GOVERNOR	SETTING
		1		
		1	Rated speed rpm	: 1240
(B) SETTING OF INJE	CTION PUMP	1	rack travel mm	
WITH GOVERNOR		1		
		1	Rated speed rpm	: 1366
		1	Tolerance 1/min	
		1	rack travel mm	4.00
GUIDE SLEEVE POSITI	ON	1		
		1	Rated speed rpm	: 1241
Rated speed rpm :	800	1	rack travel mm	
		1		
Rack travel in mm :	0.65	+	Rated speed rpm	: 1367
	← 0.35	1	Tolerance 1/min	
		1	rack travel mm	: 4.00
governor spring		+		
pre-tension		+	Rated speed rpm	: 1242
click setting x :	4.50	+	rack travel mm	
•		1		
		+	Rated speed rpm	: 1368
FULL LOAD DELIVERY	AT FULL LOAD STOP	+	Tolerance 1/min	: +- 4
		+	rack travel mm	: 4.00
Rated speed rpm :	1200	+		
Aneroid pressure		+	Rated speed rpm	: 1243
hPa :	1300	+	rack travel mm	: 12.30
Del. quantity		+		
cm3/1000 strokes :	118.0	+	Rated speed rpm	: 1369
Tolerance		+	Tolerance 1/min	: +- 4
cm3/1000 strokes :	← 1.0	+	rack travel mm	: 4.00
Check tolerance		+		
cm3/1000s. :	← 3.0	+	Rated speed rpm	: 1244
Spreral		+	rack travel mm	: 12.30
Tolerance		+		
cm3/1000 strokes :	3.5	+	Rated speed rpm	: 1370
Check tolerance		+	Tolerance 1/min	: +- 4
cm3/1000s. :	6.0	+	rack travel mm	: 4.00
		+		
		+	Rated speed rpm	: 1245
		+	rack travel mm	: 12.30
CONTROL LEVER		+		
		+	Rated speed rpm	: 1371
		+	Tolerance 1/min	: +- 4

: 4.00	Ī
	‡
out bumper spring	‡
750	+
	+
: 3.90	‡
	1
	+
	+
	+
: +- 30	‡
: 100	Ţ
	+
; > 19.00	†
	‡
	+
	+
: 1200_	+
	†
: +- 0.05	<u>†</u>
. 750	‡
	4
: ← 0.10	+
	+
	+
	1
	1
	+
	+
500	+
	‡
	Ţ
: + 0.10	+
	+
	+
	Ī
500	1
: +- 0.10	+ :
	+
: 500	+ :
• 400	+ !
	‡ !
	Į,
= - · -	+ (
	• •
: 300	+ (
: 300 : 1.20 : + 0.10	
	: 350 : 2.00 : 430 : + 30 : 100 : > 19.00 : 13.30 : + 0.05 : 750 : 13.30 : + 0.10 : 500 : 13.30 : + 0.10

FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	4700
hPa	: 1300
Rated speed rpm	: 750
Del. quantity	. 447.0
cm3/1000 strokes	: 117.0
Tolerance cm3/1000 strokes	: + 1.5
Check tolerance	1.5
cm3/1000s.	: +- 4.0
Spreed	,,,,
Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance	
cm3/1000s.	: 7.0
Anonoid proceurs	
Aneroid pressure	•
Rated speed rpm	500
Del. quantity	
cm3/1000 strokes	: 48.0
Tolerance	
cm3/1000 strokes	: + 1.0
Check tolerance	
cm3/1000s.	: +- 3.0
STARTING FUEL DEL	.IVERY
Rated speed rpm	: 100
Del. quantity	415.0
cm3/1000 strokes Tolerance	: 145.0
cm3/1000 strokes	: +- 5.0
Check tolerance	
cm3/1000s.	: +- 8.0
LOW TO E	······································
LOW IDLE	
Rated speed rpm	: 350
rack travel mm	: 3.90
Tolerance mm	: ← 0.30
Del. quantity	40.0
cm3/1000 strokes Tolerance	: 12.0
cm3/1000 strokes	: +- 2.0
Check tolerance	
CHECK COLET BILLE	
cm3/1000s.	: +- 4.5
cm3/1000s. Spreed	: +- 4.5
cm3/1000s. Spreed Tolerance	
cm3/1000s. Spreed	: +- 4.5 : 3.5

cm3/1000s.	:	5.5	
			

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400%...

: 30.08.95 Edition Test oil : ISO 4113

Combination No. : 0 403 446 158

Injection pump

Pump designation : PES6MW100/720RS1131 : 0 413 406 123 EP type number

Governor

Governer design. : RQV300...1300MW50-1 : 0 420 083 089 Governer no.

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : 0M 366 LA Motor

: 150.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : **←** 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar 1.5 Tolerance bar

: 1 680 750 015 Test lines

Outside diameter : 6.8

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 : + 0.05Tolerance mm Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

: + 0.50Tolerance

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 12.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 97.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	+	Tolerance mm : +- 0.50
Check tolerance	+	
cm3/1000s.	: 6.0	GUIDE SLEEVE POSITION
Dated around nam	: 300	GOIDE STEENE LOSILION
Rated speed rpm	: 500	Rated speed rpm : 1340
Rack travel in mn	n: 6.80 +	
Tolerance mm	: + 0.20	Rack travel in mm: 16.50
Del. quantity	1	Tolerance mm : + 1.30
cm3/1000 strokes	: 11.0	, , , , , , , , , , , , , , , , , , , ,
Tolerance	+	
cm3/1000 strokes Check tolerance	: + 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: + 4.5	Rated speed rpm : 1300
Spreed	1	Aneroid pressure
Tolerance	+	hPa : 700
cm3/1000 strokes	: 3.5	Del. quantity
Check tolerance	+	cm3/1000 strokes : 97.5
cm3/1000s.	: 5.5	Tolerance
	+	cm3/1000 strokes : + 1.0
(m)	†	Check tolerance
(B) SETTING OF IN	NJECTION PUMP	cm3/1000s. : +- 3.0
WITH GOVERNOR	†	Spreed
	+	Tolerance
	+	cm3/1000 strokes : 3.5
GUIDE SLEEVE TRAV	/EL +	Check tolerance
	+	cm3/1000s. : 6.0
Rated speed rpm	: 300 +	
guide sleeve	+	
travel mm	: 1.40 +	
Tolerance mm	: ← 0.25 +	CONTROL LEVER
	+	
Rated speed rpm	: 1354	control lever
guide sleeve	+	position degree : 118.0
travel mm	: 8.68	tolerance degree : + 4.0
Tolerance mm	: ← 0.25 +	
	+	RATED SPEED
Rated speed rpm	: 881	
guide sleeve	+	rack travel mm : 11.20
travel mm	: 5.02	Rated speed rpm : 1345
Tolerance mm	: + 0.25	Tolerance 1/min : +- 5
	+	
Rated speed rpm	: 363	rack travel mm : 4.00
guide sleeve	+	Rated speed rpm : 1455
travel mm	: 2.05	Tolerance 1/min : + 15
Tolerance mm	: + 0.25 +	
	+	rack travel mm : 0.50
Rated speed rpm	: 413 +	Tolerance mm : + 0.50
guide sleeve	+	Rated speed rpm : 1550
travel mm	: 2.44	
Tolerance mm	: ← 0.25 +	
	+	
Rated speed rpm	: 500	LOW IDLE
guide sleeve	+	
travel mm	: 2.99	
Tolerance mm	: + 0.25 +	control lever
	1	position degree : 82.0
Rated speed rpm	: 1600	tolerance degree : + 4.0
guide sleeve	14.50	T
travel mm	: 13.50 +	Testing:

NO5

Datad assed ass	. 700	
Rated speed rpm	. 680	FUEL DELIVERY CHARACTERISTICS
rack travel mm Tolerance mm	1 0.00	FOEL DELIVERY CHARACTERISTICS
TOTEL BLICE THA	· - 0.10	- Aneroid pressure
Rated speed rpm	· 100	- hPa : 700
kated speed rpill	. 100	- Rated speed rpm : 575
CRT mm min.	. > 740	
CRI and miri.	7.00	- Del. quantity - cm3/1000 strokes : 84.5
	T	- Tolerance
TORQUE CONTROL		- cm3/1000 strokes : +- 1.5
TORQUE CONTROL	†	
Dated aread are	. 4700	- Check tolerance
Rated speed rpm		- cm3/1000s. : + 4.0
rack travel mm	16.60	- Spreed
Tolerance mm	: +- 0.05	- Tolerance
		- cm3/1000 strokes : 5.0
Rated speed rpm rack travel mm Tolerance mm	; 3/3	- Check tolerance
rack travel mm	12.25	- cm3/1000s. : 7.0
Tolerance mm	: + 0.10 +	•
	†	- Aneroid pressure
		- hPa : -
ANEROID/ALTITUDE		- Rated speed rpm : 500
COMPENSATOR TEST	†	- Del. quantity
	+	- cm3/1000 strokes : 52.0
	+	- Tolerance
SETTING	+	- cm3/1000 strokes : +- 1.0
	+	- Check tolerance
Rated speed rpm	: 500	- cm3/1000s. : + 3.0
Pressure hPa	: 700 }	•
rack travel mm	: 12.25 }	
Tolerance mm		- Breakaway
	+	•
MEASUREMENT	+	
	4	Rack travel in mm: 11.20
Pressure hPa	: ~ +	Rated speed rpm : 1345
Rated speed rpm		Tolerance 1/min : + 5
Tolerance mm	: + 0.05	•
	1	•
Rated speed rpm	: 500	
	4	STARTING FUEL DELIVERY
Pressure hPa	: 225	•
rack travel mm	: 1.40	Rated speed rpm : 100
Tolerance mm	: + 0.10 +	Del. quantity
		cm3/1000 strokes : 88.0
	+	CIID 1000 SCIONES . 00.0
Pressure hPa	: 170	
Pressure hPa	: 170	Tolerance
rack travel mm	: 0.40	Tolerance cm3/1000 strokes : +- 5.0
		Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm	: 0.40	Tolerance cm3/1000 strokes : +- 5.0
rack travel mm Tolerance mm	: 0.40	Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm	: 0.40	Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm START CUT-OUT	: + 0.40 : + 0.10	Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm START CUT-OUT Rated speed rpm	: + 0.40 : + 0.10 : > 100	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
rack travel mm Tolerance mm START CUT-OUT	: + 0.40 : + 0.10 : > 100	Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm	: + 0.40 : + 0.10 : > 100	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000S. : + 8.0 LOW IDLE
rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check	: + 0.40 : + 0.10 : > 100 : < 220	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000S. : + 8.0 LOW IDLE Rated speed rpm : 300
rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min	: + 0.40 : + 0.10 : > 100	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000S. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 6.80
rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check	: + 0.40 : + 0.10 : > 100 : < 220 : > 80	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 6.80 Tolerance mm : + 0.20
rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min	: + 0.40 : + 0.10 : > 100 : < 220	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000S. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 6.80

Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.5
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.08.95 Edition Test oil : ISO 4113

Combination No. : 0 403 474 019

Injection pump

Pump designation : PES4MW100/720RS1151 EP type number : 0 413 404 104

Governor

Governer design. : RSV350...1200MW0A346

: -3

: 0 420 085 179 Governer no.

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : OM 364 A Motor Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-1.0

Prestroke mm 3.75 Tolerance mm : + 0.05Check

tolerance mm : + 0.10Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

Tolerance : + 0.50Check

tolerance *NW : ← 0.75

BASIC SETTING

Rated speed rpm : 1200

11.55 Rack travel in mm: Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 88.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +cm3/1000s. 3.0

Spreed Tolerance

cm3/1000 strokes :

3.5

Check tolerance cm3/1000s. : 6.0	tolerance degree : +- 4.0
Rated speed rpm : 350	+ RATED SPEED
	+ rack travel mm : 1.00
Rack travel in mm : 6.40	+ Tolerance mm $: + 0.70$
Tolerance mm : +- 0.40	+ Rated speed rpm : 1450
Del. quantity	
cm3/1000 strokes : 12.0	+ rack travel mm : 4.00
Tolerance	+ rack travel mm : 4.00 + Rated speed rpm : 1340
cm3/1000 strokes : + 2.0	1 Mateu opeca i piii . 1545
Check tolerance	+ rack travel mm : 10.50
cm3/1000s. : +- 4.5	Rated speed rpm : 1248
Spreed	Tolerance 1/min : + 8
	T rocerdice mini o
Tolerance cm3/1000 strokes : 3.5	ACCUMPLY COVERNOR CETTAIC
	ASSEMBLY GOVERNOR SETTING
Check tolerance cm3/1000s. : 5.5	T Dated around our 1 42/0
cm3/1000s. : 5.5	Rated speed rpm : 1240
	+ rack travel mm : 10.50
	†
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1289
WITH GOVERNOR	+ Tolerance 1/min : +- 4
	+ rack travel mm : 4.00
	+
	+ Rated speed rpm : 1241
GUIDE SLEEVE POSITION	+ rack travel mm : 10.50
	+
Rated speed rpm : 800	+ Rated speed rpm : 1290
	+ Tolerance 1/min : + 4
Rack travel in mm : 0.65	+ rack travel mm : 4.00
Tolerance mm : + 0.35	+
	+ Rated speed rpm : 1242
governor spring	+ rack travel mm : 10.50
pre-tension	+
click setting x : 5.75	+ Rated speed rpm : 1291
•	+ Tolerance 1/min : + 4
	+ rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	+
	Rated speed rpm : 1243
Rated speed rpm : 1200	+ rack travel mm : 10.50
Aneroid pressure	+
hPa : 700	+ Rated speed rpm : 1292
Del. quantity	+ Tolerance 1/min : +- 4
cm3/1000 strokes : 88.0	rack travel mm : 4.00
Tolerance	-
cm3/1000 strokes : + 1.0	+ Rated speed rpm : 1244
Check tolerance	rack travel mm : 10.50
cm3/1000s. : + 3.0	
Spreed	Rated speed rpm : 1293
Tolerance	+ Tolerance 1/min : + 4
cm3/1000 strokes : 3.5	rack travel mm : 4.00
Check tolerance	
cm3/1000s. : 6.0	Rated speed rpm : 1245
	+ rack travel mm : 10.50
	1 2013 01 01 01 101 101 101 101 101 101 101
	Rated speed rpm : 1294
CONTROL LEVER	+ Tolerance 1/min : + 4
CONTINUE DEVEN	+ rack travel mm : 4.00
control lever	TOO THE THE
position degree : 108.0	1
posterior degree . 100.0	t e

LOW IDLE	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 6.40 : +- 0.40
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 11.55 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 12.40 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : ← 0.05
Rated speed rpm	: 500
	: 500 : 375 : 1.70 : + 0.10

FUEL DELIVERY CHA	ARACTERISTICS		
Aneroid pressure			
hPa	: 700		
Rated speed rpm	: 600		
Del. quantity			
cm3/1000 strokes	: 87.0		
Tolerance	. 45		
cm3/1000 strokes	: + 1.5		
Check tolerance			
cm3/1000s. Spreed	: +- 4.0		
Tolerance			
cm3/1000 strokes	: 5.0		
Check tolerance			
cm3/1000s.	: 7.0		
Aneroid pressure			
hPa	•		
Rated speed rpm	: 500		
Del. quantity			
cm3/1000 strokes Tolerance	: 48.0		
cm3/1000 strokes	: + 1.0		
Check tolerance	• • • • •		
cm3/1000s.	: +- 3.0		
STARTING FUEL DELIVERY			
STARTING FUEL DEL	IVERY		
Rated speed rpm			
Rated speed rpm Del. quantity	: 100		
Rated speed rpm Del. quantity cm3/1000 strokes	: 100		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 100 : 80.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 100		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 80.0 : + 5.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 100 : 80.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 80.0 : + 5.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 80.0 : + 5.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 80.0 : + 5.0 : + 8.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 80.0 : + 5.0 : + 8.0 : 350 : 6.40		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm	: 100 : 80.0 : + 5.0 : + 8.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 80.0 : ← 5.0 : ← 8.0 : 4.0 : 6.40 : ← 0.40		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 100 : 80.0 : + 5.0 : + 8.0 : 350 : 6.40		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 100 : 80.0 : + 5.0 : + 8.0 : 4.0 : 6.40 : + 0.40 : 12.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 100 : 80.0 : ← 5.0 : ← 8.0 : 4.0 : 6.40 : ← 0.40		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 80.0 : + 5.0 : + 8.0 : 4.0 : 6.40 : + 0.40 : 12.0 : + 2.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 80.0 : + 5.0 : + 8.0 : 4.0 : 6.40 : + 0.40 : 12.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 80.0 : + 5.0 : + 8.0 : 4.0 : 6.40 : + 0.40 : 12.0 : + 2.0		
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 100 : 80.0 : + 5.0 : + 8.0 : 4.0 : 6.40 : + 0.40 : 12.0 : + 2.0		

Check tolerance cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.09.95 Test oil : ISO 4113

Combination No. : 0 400 864 088

Injection pump

Pump designation : PES4A85D410/3RS2799

EP type number : 0 410 884 944

Governor

Governer design. : RSV325...1250A2C2253

: -2L

: 0 420 232 556 Governer no.

Cust. part No. :

Customer-spec. information Customer : KHD

: BF4L913 Motor Power KW : 78.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

173.5 : +- 1.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.50 : + 0.05Tolerance mm

Check

tolerance mm $: \div 0.10$

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 11.75 : + 0.05Tolerance mm

Del. quantity

cm3/1000 strokes : 84.5

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance

cm3/1000s. **:** +- 2.5

Spreed

Tolerance

cm3/1000 strokes :

3.0

Check tolerance

cm3/1000s. :

7.0

Rated speed rpm : 325

N12

Book through in the 2.78
Rack travel in mm: 7.70 Tolerance mm: $+$ 0.10
Del. quantity
cm3/1000 strokes : 15.0
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance cm3/1000s. : + 4.0
cm3/1000S. : +- 4.0 Spreed
Tolerance
cm3/1000 strokes : 4.5
Check tolerance
cm3/1000s. : 7.0
(B) SETTING OF INJECTION PUMP
WITH GOVERNOR
WITH GOVERNOR
GUIDE SLEEVE POSITION
Rated speed rom : 800
Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20
governor spring
pre-tension
click setting $x : 4.50$
FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 1250
Aneroid pressure
hPa : 1000
Del. quantity cm3/1000 strokes : 84.5
cm3/1000 strokes : 84.5 Tolerance
cm3/1000 strokes : +- 0.5
Check tolerance
cm3/1000s. : + 2.5
Spreed
Tolerance cm3/1000 strokes : 3.0
Check tolerance
cm3/1000s. : 7.0
COLTROL LEUCO
CONTROL LEVER
control lever
control lever position degree : 102.0
control lever position degree : 102.0

rack travel mm	: 10.70
Rated speed rpm	: 1295
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
Rated speed rpm	: 1375
Tolerance 1/min	: + 15
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 1525
rack travel mm	: 4.00
Rated speed rpm	: 1415

LOW IDLE

:	73.0
: +-	4.0
	•

Setting point w/out bumper spring

Rated speed	rpm	:	325
rack travel	mm	:	7.20

Testing:

Rated speed rpm	: 325
rack travel mm	: 7.70
Tolerance mm	: + 0.10
rack travel mm	: 2.00
Rated speed rpm	: 580
Tolerance 1/min	: + 30
Rated speed rpm	: 100
CRT mm min	· > 19.50

TORQUE CONTROL

Rated speed rpm	: 1250
rack travel mm	: 11.75
Tolerance mm	: + 0.05
Rated speed rpm	: 500
rack travel mm	: 12.15
Tolerance mm	: + 0.05
Rated speed rpm	: 800
rack travel mm	: 12.00
Tolerance mm	: + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.15
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.85
Tolerance mm : + 0.05

Rated speed rpm : 500

Pressure hPa : 230 rack travel mm : 11.50 Tolerance mm : + 0.10

Pressure hPa : 300 rack travel mm : 11.85 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 520 Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 3.5

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 59.0

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance

cm3/1000s. : + 3.5

BREAKAWAY

Rack travel in mm: 10.70

Rated speed rpm : 1295
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.80
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 125.0
Tolerance

cm3/1000 strokes : + 7.5 Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

325 Rated speed rpm 7.70 rack travel mm 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance 7.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 11.09.95 Edition : ISO 4113 Test oil

Combination No. : 0 400 866 080

Injection pump

Pump designation : PES6A85D410/3RS2415

EP type number : 0 410 886 915

Governor

Governer design. : RSV325...1400A8C809L

Governer no. : 0 420 232 610

: 0423 1249 KY 0150 Cust. part No.

: -17

Customer-spec. information ; KHD Customer

: BF6L913 Motor : 118.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

tempo. °C 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : + 1.5 bar Tolerance bar

Test Lines : 1 680 750 014

Outside diameter :

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 1.95 : + 0.05Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.85 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 76.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance cm3/1000s.

: +- 2.5

Spreed

Tolerance

cm3/1000 strokes :

3.0

Check tolerance

cm3/1000s. 7.0

	+
Rated speed rpm : 325	+ rack travel mm : 9.80
Doob Assessed to make 8 00	+ Rated speed rpm : 1445
Rack travel in mm : 8.00 Tolerance mm : +- 0.10	Tolerance 1/min : +- 5
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 12.5	+ Rated speed rpm : 1485
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : + 2.0	+ rack travel mm : 0.85
Check tolerance	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
Spreed	+ Rated speed rpm : 1600
Tolerance	+
cm3/1000 strokes : 4.5	+ rack travel mm : 4.00
Check tolerance cm3/1000s. : 7.0	Rated speed rpm : 1520
CIID/ (0003	I
	+
(B) SETTING OF INJECTION PUMP	+ LOW IDLE
WITH GOVERNOR	†
	T control lever
	position degree : 68.0
GUIDE SLEEVE POSITION	+
Datad arrad was a 200	Setting point w/out bumper spring
Rated speed rpm : 800	T + Rated speed rpm : 325
Rack travel in mm: 0.50	rack travel mm : 7.50
Tolerance mm : + 0.20	+
	† Testing:
governor spring pre-tension	+ Rated speed rpm : 325
click setting x : 5.25	rack travel mm : 8.00
	Tolerance mm : + 0.10
THE CAR STATISTICS AT THE LOSS OFF	†
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 630
Rated speed rpm : 1400	Tolerance 1/min : + 30
Aneroid pressure	+
hPa : 700	Rated speed rpm : 100
Del. quantity - cm3/1000 strokes : 76.5 -	† - CRT man min. :> 19.50
Tolerance -	CRI mai mili
cm3/1000 strokes : +- 0.5	
Check tolerance	TORQUE CONTROL
cm3/1000s. : +- 2.5	† Rated speed rpm : 1400
Spreed - Tolerance -	rack travel mm : 10.85
cm3/1000 strokes : 3.0 -	Tolerance mm : + 0.05
Check tolerance	500
cm3/1000s. : 7.0	Rated speed rpm : 500 rack travel mm : 12.05
• •	Tolerance mm : + 0.05
CONTROL LEVER -	Rated speed rpm : 1040
control lover	├ rack travel mm : 11.50 ├ Tolerance mm : ← 0.10
control lever position degree : 119.0	Tolerance mm : +- 0.10
podition degree . Three	-
RATED SPEED	+

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 12.05
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.25
Tolerance mm : + 0.05

Rated speed rpm : 500

Pressure hPa : 95 rack travel mm : 10.70 Tolerance mm : + 0.10

Pressure hPa : 360 rack travel mm : 11.75 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 45.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : \leftarrow 2.5

BREAKAWAY

Rack travel in mm: 9.80
Rated speed rpm: 1445
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 17.20 Tolerance mm : + 0.20

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 8.00 Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 12.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +--4.0 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 08.09.95 Edition : ISO 4113 Test oil

Combination No. : 0 400 866 221

Injection pump

Pump designation : PES6A95D410/3RS2876

EP type number : 0 410 896 886

Governor

Governer design. : RSV325...900A7C720L

Governer no. : 0 420 232 339

Cust. part No. : 0 423 1366 KY0150

: -17

Customer-spec. information Customer : KHD Motor : BF6L913C

Power KW : 102.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0 x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 2.65 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm: 13.10

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

: +-3.0 cm3/1000s.

Spreed

Tolerance	.
cm3/1000 strokes : 3.5	control lever 99.0
Check tolerance cm3/1000s. : 8.0 -	tolerance degree : + 4.0
Rated speed rpm : 325	RATED SPEED
Rack travel in mm: 6.80	rack travel mm : 12.10 Rated speed rpm : 945
Tolerance mm : + 0.10 - Del. quantity -	- Tolerance 1/min : +- 5
cm3/1000 strokes : 12.0 -	rack travel mm : 4.00 Rated speed rpm : 965
cm3/1000 strokes : +- 2.0 Check tolerance	- Tolerance 1/min : + 15
cm3/1000s. : +- 4.5	rack travel mm : 0.85
Spreed Tolerance	- Tolerance mm : +- 0.55 - Rated speed rpm : 1100
cm3/1000 strokes : 5.5 - Check tolerance -	- rack travel mm : 4.00
cm3/1000s. : 9.0	Rated speed rpm : 985
1	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- LOW IDLE
<u>-1</u>	<u>-</u>
	control lever
GUIDE SLEEVE POSITION	- position degree : 66.0 - tolerance degree : +- 4.0
Rated speed rpm : 800	- Setting point w/out bumper spring
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	•
Toterance in . +- 0.20	- Rated speed rpm : 325 - rack travel mm : 6.30
governor spring pre-tension	- - Testing:
click setting x : 4.00	•
	- Rated speed rpm : 325 - rack travel mm : 6.80
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
Rated speed rpm : 900	rack travel mm : 2.00
Aneroid pressure + + + + + + + + + + + + + + + + + + +	- Rated speed rpm : 400 - Tolerance 1/min : +- 30
Del. quantity	·
cm3/1000 strokes : 92.0	- TORQUE CONTROL
cm3/1000 strokes : + 1.0	•
Check tolerance + 3.0 + 3.0	Rated speed rpm : 900 rack travel mm : 13.10
Spreed	- Tolerance mm : + 0.05
Tolerance cm3/1000 strokes : 3.5	· Rated speed rpm : 600
Check tolerance	rack travel mm : 13.15
cm3/1000s. : 8.0	Tolerance mm : + 0.05
Ţ	
	•

CONTROL LEVER

BREAKAWAY

Rack travel in mm : 12.10
Rated speed rpm : 945
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 13.70 Tolerance mm : + 0.20

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

325 Rated speed rpm 6.80 rack travel mm : Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance 2.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 4.5 Spreed Tolerance 5.5 cm3/1000 strokes : Check tolerance 9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.09.95 Test oil : ISO 4113

Combination No. : 0 401 846 545

Injection pump

Pump designation : PE6P110A32ORS494-1 EP type number : 0 411 816 168

Governor

Governer design. : RQV300...1200PA1184

Governer no. : 0 421 814 112

Cust. part No. : 11030926 P02 V.02/95

Customer-spec. information

Customer : VME Motor : TD71K

Power KW : 148.0

- OWE! NW . 140.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 11.80
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 117.0

Tolerance cm3/1000 strokes :-	← 1.0 ‡	Tolerance mm : + 0.25 Rated speed rpm : 1490
Check tolerance cm3/1000s.	+ 3.0 +	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Spreed Tolerance		
cm3/1000 strokes :	4.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. :	7.5	Rated speed rpm : 1340 Rack travel in mm : 10.00
Del. quantity cm3/1000 strokes : Tolerance	19.0	Tolerance mm : +- 1.50
cm3/1000 strokes : +	⊢ 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : d Spreed	- 4.0	Rated speed rpm : 700 Aneroid pressure
Tolerance cm3/1000 strokes :	3.0	hPa : 1500 Del. quantity
Check tolerance	+	cm3/1000 strokes : 117.0
cm3/1000s. :	6.0	Tolerance cm3/1000 strokes : + 1.0
(B) SETTING OF INJECT	TION PUMP	Check tolerance cm3/1000s. : + 3.0 Spreed
		Tolerance cm3/1000 strokes : 4.0
GUIDE SLEEVE TRAVEL	<u> </u>	Check tolerance cm3/1000s. : 7.5
B-A1	300	. , , ,
guide sleeve	+	
guide sleeve travel mm :	1.12	CONTROL LEVER
guide sleeve travel mm : Tolerance mm : +	1.12 - 0.25	CONTROL LEVER
guide sleeve travel mm : Tolerance mm : +	1.12 - 0.25	control lever
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm :	1.12 - 0.25 1256 8.57	
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm :	1.12 - 0.25 1256	control lever position degree : 48.0 tolerance degree : + 4.0
guide sleeve travel mm : Tolerance mm : # Rated speed rpm : guide sleeve travel mm : Tolerance mm : # Rated speed rpm :	1.12 - 0.25 1256 8.57	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : Tolerance mm : + Rated speed rpm : quide sleeve	1.12 - 0.25 1256 8.57 - 0.25 905	control lever position degree : 48.0 tolerance degree : + 4.0 control lever
guide sleeve travel mm : Tolerance mm : # Rated speed rpm : guide sleeve travel mm : Tolerance mm : # Rated speed rpm : guide sleeve travel mm : #	1.12 - 0.25 1256 8.57 - 0.25	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : Tolerance mm : + Rated speed rpm : + Rated speed rpm : +	1.12 - 0.25 1256 8.57 - 0.25 905 5.37	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.80
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : + Rated speed rpm : +	1.12 - 0.25 1256 8.57 - 0.25 905 5.37 - 0.25	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : +	1.12 - 0.25 1256 8.57 - 0.25 905 5.37 - 0.25	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.80 Rated speed rpm : 1245 Tolerance 1/min : + 5
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve	1.12 - 0.25 1256 8.57 - 0.25 905 5.37 - 0.25 435 2.03 - 0.25 485	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.80 Rated speed rpm : 1245
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : +	1.12 - 0.25 1256 8.57 - 0.25 905 5.37 - 0.25 435 2.03 - 0.25 485 2.43	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.80 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1335 Tolerance 1/min : + 15
guide sleeve travel mm : Tolerance mm : # Rated speed rpm : guide sleeve travel mm : # Rated speed rpm : guide sleeve travel mm : # Rated speed rpm : guide sleeve travel mm : # Rated speed rpm : guide sleeve travel mm : # Rated speed rpm : guide sleeve travel mm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : # Rated speed rpm : #	1.12 - 0.25 1256 8.57 - 0.25 905 5.37 - 0.25 435 2.03 - 0.25 485 2.43 - 0.25	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.80 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1335 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm : Tolerance mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : + Rated speed rpm : guide sleeve travel mm : +	1.12 - 0.25 1256 8.57 - 0.25 905 5.37 - 0.25 435 2.03 - 0.25 485 2.43 - 0.25 590	control lever position degree : 48.0 tolerance degree : + 4.0 control lever position degree : 107.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.80 Rated speed rpm : 1245 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1335 Tolerance 1/min : + 15 rack travel mm : 0.50

LOW IDLE

control lever		
position degree	:	72.0
tolerance degree	: +-	4.0

control lever

position degree : 13.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm	:	300
rack travel mm	:	5.20
Tolerance mm	: +-	- 0.20

Rated speed rpm : 200

CRT mm min. : > 6.70

Rated speed rpm : 360

TORQUE CONTROL

Rated speed rpm	:	700
rack travel mm	:	11.80
Tolerance mm	: +-	0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1500
rack travel mm	:	11.80
Tolerance mm	• -	-0.05

MEASUREMENT

Pressure hPa	:	-
Rated speed rpm	:	500
rack travel mm	:	9.60
Tolerance mm	: +	- 0.10

Rated speed rpm : 500

Pressure hPa	:	500
rack travel mm	:	1.90
Tolerance mm	: +-	0.10

Pressure hPa : 200
rack travel mm : 0.25
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 80.0
Tolerance

cm3/1000 strokes : + 1.0 Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm.: 10.30 Rated speed rpm : 1245 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 175.0
Tolerance
cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Del. quantity		
cm3/1000 strokes	:	19.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.0
Spreed		
Tolerance		
cm3/1000 strokes	:	3.0
Check tolerance		
cm3/1000s.	:	6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 22.09.95 : ISO 4113

Combination No. : 0 401 846 865

Injection pump

Pump designation : PE6P120A320RS3202 EP type number : 0 411 826 769

Governor

Governer design. : RQV300...1025PA657

: -23

Governer no.

: 0 421 813 669

Cust. part No.

: 11031515

: -P04 v.12/88

Customer-spec. information

Customer

: VME

Motor

: TD122A 35

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance *C

2.0

Overflow valve : 1 457 413 010

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

208.5

Tolerance bar

1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter:

3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar:

Tolerance bar : + 1.0

Prestroke mm

: **←** 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no.

: 1

BASIC SETTING

Rated speed rpm :

700

12.05 Rack travel in mm:

: ÷ 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes :

209.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance +	
cm3/1000s. : + 4.0	RATED SPEED
Spreed	rack travel mm : 11.05
Tolerance +	Rated speed rpm : 1085
cm3/1000 strokes : 5.0	Tolerance 1/min : +- 5
Check tolerance +	rack travel mm : 4.00
cm3/1000s. : 9.0 +	Rated speed rpm : 1155
Del. quantity	Tolerance 1/min : +- 15
cm3/1000 strokes : 24.0 +	rack travel mm : 0.50
Tolerance	Tolerance mm : + 0.50
cm3/1000 strokes : + 2.5 + Check tolerance +	Rated speed rpm : 1250
cm3/1000s. : + 5.0	
Spreed +	
Tolerance +	LOW IDLE
cm3/1000 strokes : 5.0 + Check tolerance	
cm3/1000s. : 7.0	control lever
+	position degree : 67.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 4.0
WITH GOVERNOR	Testing:
Ī	Rated speed rpm : 300
	rack travel mm : 5.00
GUIDE SLEEVE POSITION	Tolerance mm : + 0.20
Rated speed rpm : 1080	Rated speed rpm : 100
Rack travel in mm: 16.50	CRT mm min. :> 6.50
Tolerance mm : + 1.30 +	7/0
	Rated speed rpm : 360
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 700	TORQUE CONTROL
Rated speed rpm : 700 +	Rated speed rpm : 700
hPa : 900 +	rack travel mm : 12.05
Del. quantity	Tolerance mm : + 0.05
cm3/1000 strokes : 209.0 + Tolerance	
cm3/1000 strokes : + 1.0	ANEROID/ALTITUDE
Check tolerance	COMPENSATOR TEST
cm3/1000s. : + 4.0 +	
Tolerance +	SETTING
cm3/1000 strokes : 5.0	0.1.1
Check tolerance + cm3/1000s. : 9.0 +	Rated speed rpm : 500 Pressure hPa : 900
CIBO7 100005 7.0	Pressure hPa : 900 rack travel mm : 12.05
+	Tolerance mm : + 0.05
CONTROL LEVER	MEASUREMENT
control lever	Pressure hPa : -
position degree : 119.0	Rated speed rpm : 500
tolerance degree : + 4.0 +	rack travel mm : 11.60

Tolerance mm : ← 0.20
Rated speed rpm : 500
Pressure hPa : 450

Pressure hPa : 450 rack travel mm : 11.75 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 194.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.05
Rated speed rpm : 1085
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 260.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : + 24.0

LOW IDLE

Del. quantity

cm3/1000 strokes : 24.0

Tolerance

cm3/1000 strokes : + 2.5

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 7.0